

Annex A City of Citrus Heights

A.1 Introduction

This Annex details the hazard mitigation planning elements specific to the City of Citrus Heights, a previously participating jurisdiction to the 2021 Sacramento County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the City. This Annex provides additional information specific to the City of Citrus Heights, with a focus on providing additional details on the planning process, risk assessment, and mitigation strategy for this jurisdiction.

A.2 Planning Process

As described above, the City of Citrus Heights followed the planning process detailed in Chapter 3 of the Base Plan. In addition to providing representation on the Sacramento County Hazard Mitigation Planning Committee (HMPC), the City formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table A-1. Additional details on Plan participation and City representatives are included in Appendix A.

Table A-1 City of Citrus Heights – Internal Planning Team

Name	Position/Title	How Participated
Leslie Blomquist	City Engineer & Flood Plain Manager - General Services Department	Reviewed drafts and was consulted on historic, recent events, and potential future events and mitigation actions taken and developed potential mitigation projects for future events.
Regina Cave	Director - General Services Department	Reviewed drafts and worked with City Counsel for adoption.
Daniel Kehrer	Principal Civil Engineer - General Services Department	Coordinated with drafts and city stakeholder reviews, developed data for Annex A-past events, local concerns, mitigation actions, etc. Attended Countywide meetings and internal planning meetings.
Casey Kempenaar	Director & Planning Division Manager - Community Development Department	Reviewed drafts and worked with City Counsel for adoption.
Steffane Lui	Associate Planner - Community Development Department	Coordinated data for Annex A-past events, reviewed City Hazard Mitigation Plans and Policies, provide local concerns, mitigation actions, etc. Attended Countywide meetings and internal planning meetings.

Name	Position/Title	How Participated
Mary Poole	Operations Manager - General Services Department	Coordinated with Operations staff to develop data for Annex A report. Reviewed drafts. Attended Countywide meetings and internal planning meetings.

Coordination with other community planning efforts is paramount to the successful implementation of this LHMP Update. This section provides information on how the City integrated the previously FEMA-approved 2021 LHMP into existing planning mechanisms and programs. Specifically, the City incorporated into or implemented the 2021 LHMP through other plans and programs shown in Table A-2.

Table A-2 2021 LHMP Incorporation

Planning Mechanism 2021 LHMP Was Incorporated or Implemented Through	Details
General Plan Update	Minor revisions to land uses were made that utilized hazard and other relevant information from the LHMP
General Plan Update, Community Health Element	In May of 2022, Citrus Heights current General Plan Community Health Element incorporates the 2021 LHMP into this Element, by reference, in accordance with the requirements of AB 2140, including a formal amendment to the General Plan.
Grant Applications	The Governor’s Office of Planning and Research Adaptation Planning Grant Programs (APGP) application was for the development of a Climate Action Plan as a tool to manage the severe weather events in Citrus Heights identified as a local hazard to the community, especially to vulnerable population (older, unhealthy, disabled, unhoused, and/or underprivileged). This application utilized hazard and climate information from the LHMP. While the grant application effort was unsuccessful, the City will continue to pursue other funding options for this critical planning effort. In fall 2025, the City submitted a FEMA HMGP Grant Application to mitigate flood and riverine impacts to a portion of the community adjacent to Cripple Creek. In March 2026 Cal OES has recommended this application to FEMA for award. FEMA scoring and evaluations were still on-going at the time of publication of this Plan Update.

A.3 Community Profile

The community profile for the City of Citrus Heights is detailed in the following sections. Figure A-1 displays a City map and the location of City of Citrus Heights within Sacramento County.

LEGEND

- Interstates
- Major Roads
- Local Roads
- Railroads
- Rivers
- Lakes
- Delta
- Parcels
- Cities
- Counties

SACRAMENTO COUNTY INSET

YOLO, PLACER, SACRAMENTO COUNTY, AMADOR, SOLANO, CALAVERA, SAN JOAQUIN, CONTRA COSTA, STANISLA

CITRUS HEIGHTS

SACRAMENTO COUNTY

0 1 2 Miles

FOSTER MORRISON CONSULTING

SACRAMENTO COUNTY

Data Source: Sacramento County, CalAtlas; Map Date: 9/28/2026.

A.3.1. Geography and Climate

Citrus Heights is located in a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the area through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin Delta (Delta) from the San Francisco Bay area.

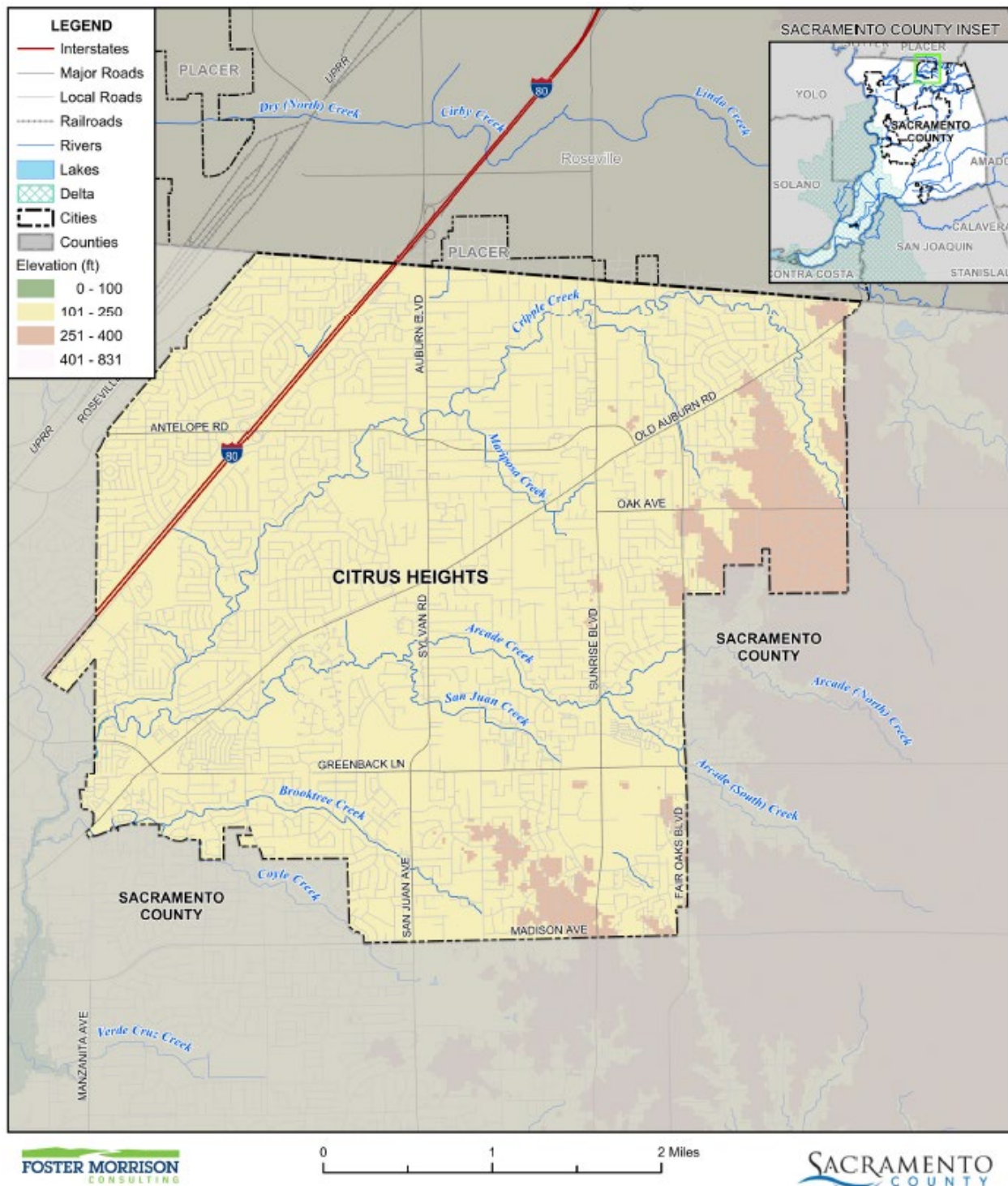
Citrus Heights is centrally located between the region’s major freeways and highways. Interstate 80, Interstate 5, U.S. Highway 50, and U.S. Highway 99 are all located from three to 11 miles from the City. The Sacramento International Airport is located approximately 20 miles from the City, while rail transportation (Amtrak) is accessible in Roseville (about 10 miles from the City).

The topography of the Citrus Heights area is characterized by flat terrain with small hills in some locations. Cripple Creek, Arcade Creek, Brooktree Creek, and Coyle Creek flow through the City. The majority of the City has been developed with residential and commercial uses. Slopes within the planning area range from zero percent to 15 percent with the majority of the steeper slopes located in the southeastern portion of Citrus Heights. Elevations range from 120 feet above mean sea level near the southwestern edge of Citrus Heights to 200 feet above mean sea level near the southeastern portion of the City. This can be seen in Figure A-2.

The Mediterranean climate of the City is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50°F to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature.

Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February). Average winter temperatures are 49°F. Also characteristic of winters are periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north.

Figure A-2 City of Citrus Heights - Elevations



Data Source: Sacramento County, Cal-Atlas; Map Date: 9/28/2026.

A.3.2. History

Throughout most of the Spanish-Mexican period of the growth of California (1542-1848), settlement was limited to a narrow coastal strip along El Camino Real with only a few isolated frontier outposts of civilization. One of these outposts was the vast estate of John Augustus Sutter, a German-Swiss immigrant, who was granted 11-square leagues of land in the Sacramento Valley under the condition that he settle 12 other families on the land. One of these Mexican land sub-grants was the Ranch Del San Juan, an approximately 20,000-acre tract of rich farmland originally granted in 1844. This sub-grant included present-day Citrus Heights.

A schoolhouse was built in 1862, spurred on by W.A. Thomas' conviction that Citrus Heights housed enough children to justify a school district. Mr. Thomas donated five acres of land on the northwest corner of Sylvan corners, and deemed it Sylvan School. Once completed, it became the educational, civic, social, and religious center of the community. Community parties and church services were held in the small, one-room building, as well as daily classes.

Adolph Van Maren, successor to his father Peter Van Maren, played a leading role in community development for many years. He served on the San Juan School Board and contributed to the development of the San Juan High School in 1915. The present site of the Citrus Heights Community Club House on Sylvan Road is on land donated by Van Maren, while the actual building is the old Sylvan School House moved after a new school facility was built in 1927.

In 1970, ground was broken for the giant Sunrise Mall, spurring a great deal of new growth in the Sunrise Boulevard-Greenback Lane area. By 1975, 101 shops, anchored by four department stores, employed 2,500 people within Sunrise Mall. Then in 1976, across Sunrise Boulevard from the Mall, rose Birdcage Walk, a collection of shops and businesses laid out along a park-like walkway. The two shopping centers spurred the construction of hundreds of businesses in the surrounding area.

In 1994, after agreement with the County was reached, the effort gained momentum and took on the challenge to raise funds to pay for the mandated Environmental Impact Report (EIR). Once accomplished, the County Board of Supervisors approved the measure for the November 1996 ballot, and a full campaign was initiated. Finally, after a 12-year battle with the County of Sacramento, the Citrus Heights residents voted on the issue. The voters approved the measure to incorporate the City on November 5, 1996, effective January 1, 1997. The measure won handily, with 62.5% of the votes.

A.3.3. Economy and Tax Base

Citrus Heights has established itself as an important suburb in the Sacramento region with its solid base of small businesses, retail chains, and food service establishments. With an ongoing commitment to providing high-quality, economical, responsive services to the local community, the City is well-positioned for future commercial redevelopment, neighborhood enhancements, and positive changes.

US Census estimates show economic characteristics for the City of Citrus Heights. These are shown in Table A-3 and Table A-4. Mean household income in the City was \$104,046. Median household income in the City was \$91,036.

Table A-3 City of Citrus Heights – Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	251	0.6%
Construction	4,571	10.6%
Manufacturing	2,479	5.8%
Wholesale trade	646	1.5%
Retail trade	5,850	13.6%
Transportation and warehousing, and utilities	1,949	4.5%
Information	995	2.3%
Finance and insurance, and real estate and rental and leasing	2,220	5.2%
Professional, scientific, and management, and administrative and waste management services	5,353	12.4%
Educational services, and health care and social assistance	10,549	24.5%
Arts, entertainment, and recreation, and accommodation and food services	3,618	8.4%
Other services, except public administration	1,866	4.3%
Public administration	2,713	6.3%

Source: US Census Bureau American Community Survey 2023 Estimates

Table A-4 City of Citrus Heights – Income and Benefits

Income Bracket	Percent
<\$10,000	3.5%
\$10,000 – \$14,999	2.2%
\$15,000 - \$24,9999	1.8%
\$25,000 – \$34,999	7.3%
\$35,000 – \$49,999	6.4%
\$50,000 – \$74,999	17.5%
\$75,000 – \$99,999	18.4%
\$100,000 – \$149,999	24.0%
\$150,000 – \$199,999	8.3%
\$200,000 or more	10.5%

Source: US Census Bureau American Community Survey 2023 Estimates

The largest Citrus Heights Employers (Alphabetical order)

- City of Citrus Heights
- Citrus Heights Post Acute
- Costco
- Sunrise Parks & Recreation District
- Lowe's
- Macy's
- Sam's Club

- San Juan Unified School District
- Stone's Casino
- Future Honda
- Target
- Wal-Mart

The City has a wide and varied tax base. Tax base information is tracked and maintained by the Sacramento County Assessor's Office. The following tables show the tax base for the City. Tax base information is tracked and maintained by the Sacramento County Assessor's Office. The following table show the tax base for the City. Table A-5 shows the secured real property value for the City (along with the other cities in the County) for the 2024-2025 and 2025-2026 tax years.

Table A-5 Local Assessment Roll Totals for the City (and other County jurisdictions) for 2024/2025 and 2025/2026

Jurisdiction	2025-26	2024-25	Net Increase	% Increase
Citrus Heights	10,025,689,554	9,655,026,938	370,662,616	4%
Elk Grove	30,447,141,962	28,732,989,483	1,714,152,479	6%
Folsom	21,947,218,449	20,668,487,354	1,278,731,095	6%
Galt	3,447,832,371	3,232,113,014	215,719,357	7%
Isleton	90,177,374	86,380,870	3,796,504	4%
Rancho Cordova	14,722,242,063	13,444,934,790	1,277,307,273	10%
Sacramento City	78,585,412,259	75,396,324,743	3,189,087,516	4%
Unincorporated Area	86,211,221,031	81,920,304,075	4,290,916,956	5%
Totals	245,476,935,063	233,136,561,267	12,340,373,796	5%

Source: Sacramento County Assessor's Office – 2025 Assessor's Annual Report

A.4 Risk Assessment

As defined by FEMA, risk is a combination of hazard, vulnerability, and exposure. “It is the impact that a hazard would have on people, services, facilities, and structures in a community and refers to the likelihood of a hazard event resulting in an adverse condition that causes injury or damage.”

The City of Citrus Heights risk assessment identifies and profiles relevant hazards and assesses the exposure of lives, property, infrastructure, and the environment to these hazards. The process allows for a better understanding of the City's potential risk and vulnerability to hazards and provides a framework for developing and prioritizing mitigation actions to reduce risk from future hazard events.

Building on the Community Profile above, a risk assessment was performed for the City utilizing the existing City boundaries. This includes the following sections:

- A.4.1 Assets Inventory and Growth and Development Trends
- A.4.2 Hazard Identification
- A.4.3 Hazard Profiles and Vulnerability to Specific Hazards

A.4.1. Assets Inventory and Growth and Development Trends

This section provides an inventory of the City of Citrus Heights’s total assets potentially at risk to hazards and an overview of growth and development trends. This section is broken into two parts:

- **Asset Inventory** – The assets inventory identifies the City of Citrus Heights’s total assets, including the people and populations; structures; critical facilities and infrastructure; community lifelines; natural, historic, and cultural resources; and economic assets and community activities of value. This data is not hazard specific, but is representative of total assets within the City, potentially at risk to identified hazards as discussed in Section A.4.3 Hazard Profiles and Vulnerability to Specific Hazards.
- **Growth and Development Trends** – A discussion of growth and development trends in the City, both current and future, is presented.

Assets Inventory

The City’s asset inventory is detailed in the following sections:

- People and Populations
- Structures
- Critical Facilities and Infrastructure
- Community Lifelines
- Natural, Historic, and Cultural Resources
- Economic Assets and Community Activities of Value

A discussion of each of these assets follows and serves as the template for the asset discussion for each hazard in Section A.4.3.

People and Populations

The most important asset within any community are the people and populations that reside in the community. This section includes an inventory of past and current populations of the City and also discusses vulnerable populations and underserved communities as a subsection of people and populations located within the City and potentially at risk to hazards. Information from the City, US Census Bureau, California Department of Finance, and other sources as detailed below form the basis of this discussion.

Historic Population Trends and Current Population

Population growth can increase the number of people living in hazard prone areas. The California Department of Finance reported that the City of Citrus Heights has 86,280 residents, as of January 1, 2025. The City of Citrus Heights has seen growth rates as shown in Table A-6. As shown, the City has grown consistently since 1970, with growth slowing recently since 2010.

Table A-6 City of Citrus Heights – Population Changes Since 1950

Year	Population	Change	% Change
1970	31,015	–	–

Year	Population	Change	% Change
1980	63,848	32,833	105.9%
1990	82,045	18,197	28.5%
2000	85,071	3,026	3.7%
2010	88,115	3,044	3.6%
2020	87,811	-304	-0.35%
2025	86,280	-1,531	-1.8%

Source: US Census Bureau, California Department of Finance (2025)

Underserved and Vulnerable Populations and Disadvantaged Communities

The City has a socially and economically diverse community, and many residents that are socially or economically disadvantaged or vulnerable due to varying reasons reside within the City. The City and surrounding County are no strangers to large natural disasters which have had a direct impact on the populations of the area. Thus, it is important to consider the potential effects of hazard events and disasters on these more vulnerable populations. Underserved and vulnerable populations and disadvantaged communities in the City are discussed by the following sources:

- US Center for Disease Control (CDC) Social Vulnerability Index
- California Department of Water Resources (CA DWR) Special Populations and Disadvantaged Community Mapping
- City Planning Team Input

CDC Social Vulnerability Index

Every community must prepare for and respond to a hazard event, including the range of natural hazards addressed in this Plan, from severe weather extremes to large potentially catastrophic events such as floods or wildfires. A number of factors, including poverty, lack of access to transportation, and crowded housing may weaken a community's ability to prevent human suffering and financial loss in a disaster. These factors are known as social vulnerability.

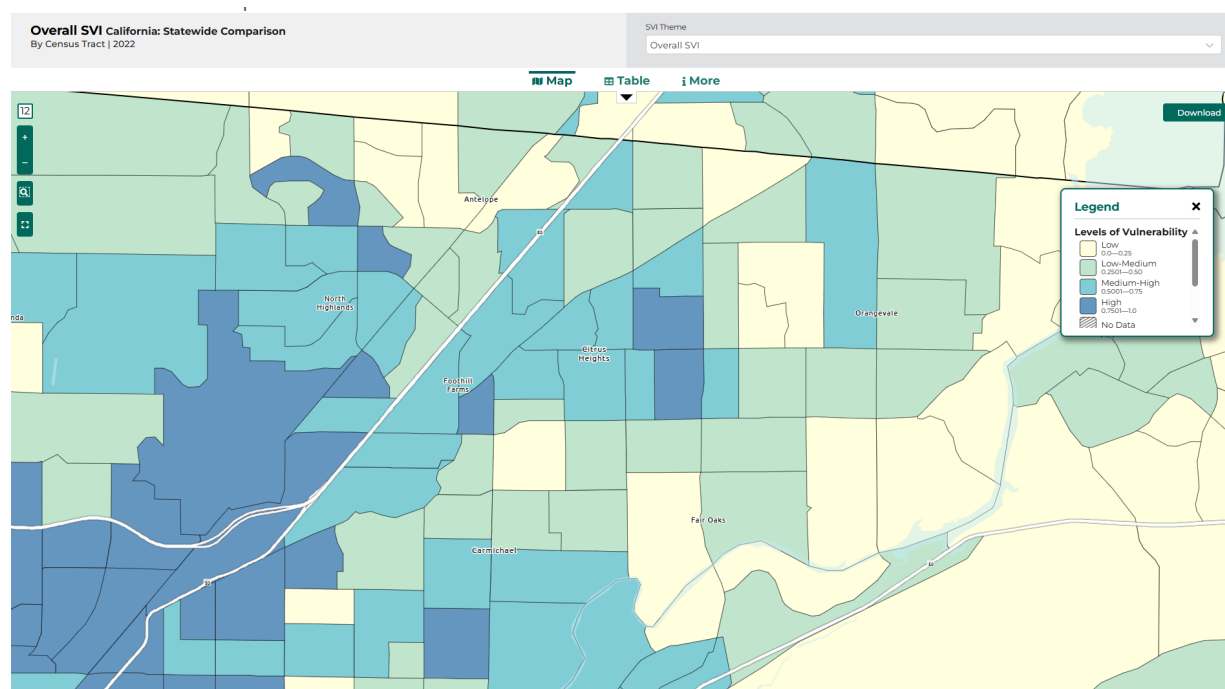
Social vulnerability refers to the potential negative effects on communities caused by external stresses on human health. Such stresses include natural or human-caused disasters, or disease outbreaks. Reducing social vulnerability can decrease both human suffering and economic loss. The Agency for Toxic Substances and Disease Registry (ATSDR) Geospatial Research, Analysis & Services Program (GRASP) created databases to help emergency response planners and public health officials identify and map communities that will most likely need support before, during, and after a hazardous event. The CDC used these databases to create the CDC Social Vulnerability Index (CDC SVI), which uses 15 U.S. census variables to help local officials identify communities that may need additional support before, during, or after disasters.

CDC SVI uses U.S. Census data to determine the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the Census collects statistical data. The CDC SVI ranks each tract on 15 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into

four related themes. Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. Maps of the four themes for the City are shown in the figures below.

The overall SVI map is shown in Figure A-3; the socioeconomic SVI for the census tracts in and around the City are shown in Figure A-4; the household composition SVI is shown in Figure A-5; the minority and language SVI is shown in Figure A-6; and the housing and transportation SVI is shown in Figure A-7. Overall, the maps indicate that, in general, the City sees low to moderate changes in each SVI across the City.

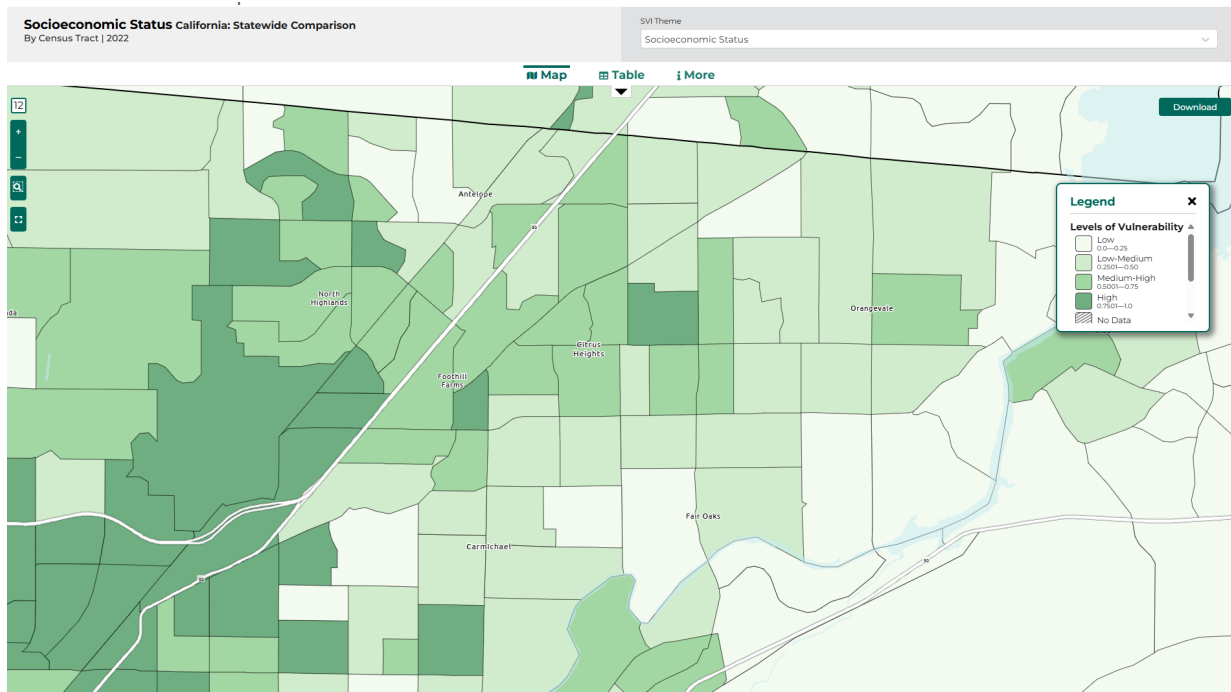
Figure A-3 City of Citrus Heights – Overall Social Vulnerability



Source: CDC Social Vulnerability Index – map retrieved 9/22/2025

Level of Vulnerability Rating: **Yellow** – Low; **Green** – Low/Medium; **Aqua** – Medium/High; **Blue** – High; **Grey Hatched** – No Data; **Grey** – Not Available

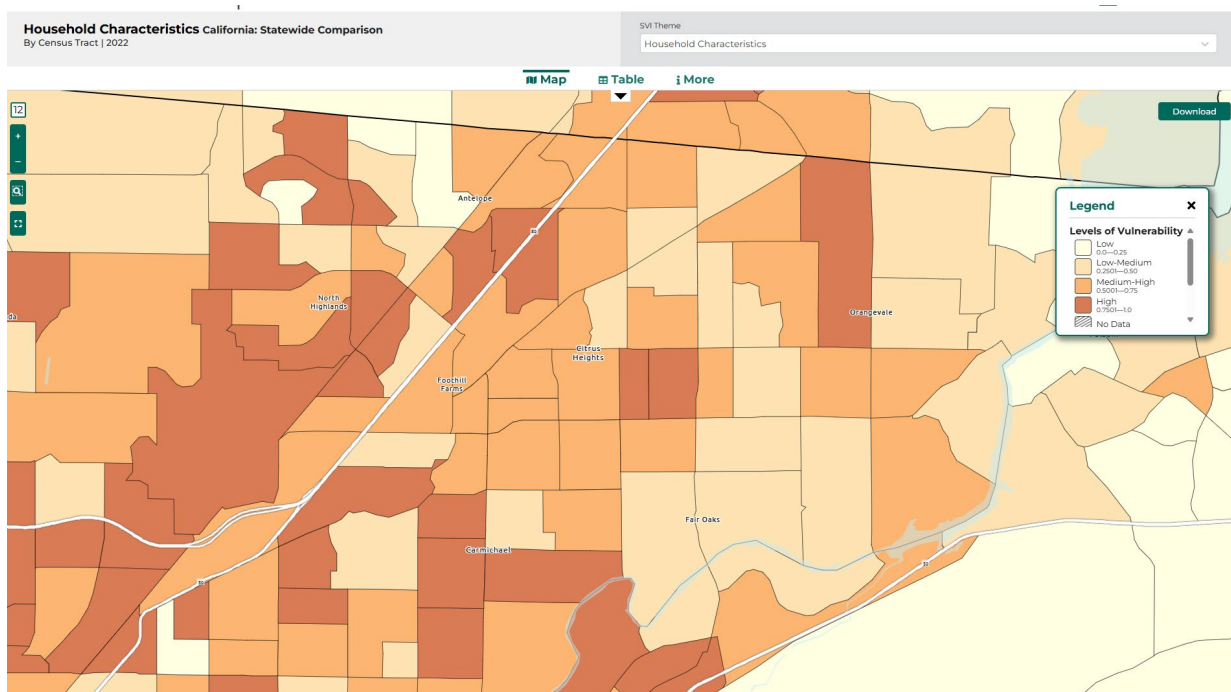
Figure A-4 City of Citrus Heights – Socioeconomic Status Vulnerability



Source: CDC Social Vulnerability Index – map retrieved 9/22/2025

Level of Vulnerability Rating: **Faint Green** – Low; **Light Green** – Low/Medium; **Green** – Medium/High; **Dark Green** – High; **Grey Hatched** – No Data; **Grey** – Not Available

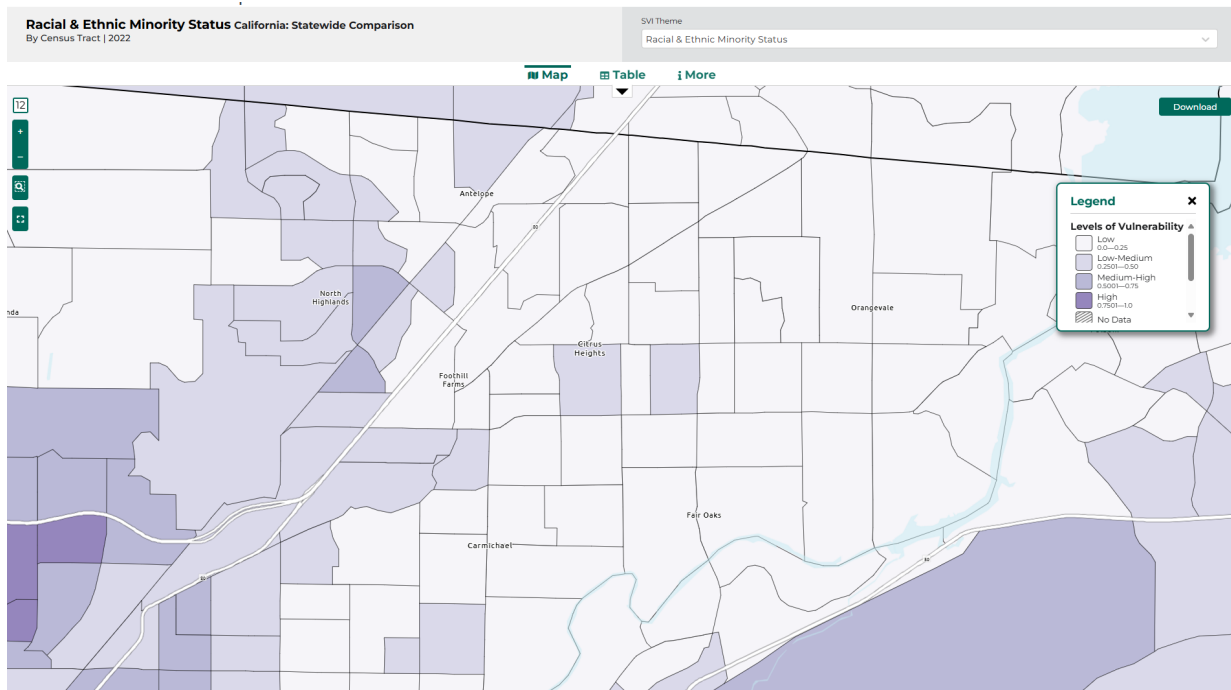
Figure A-5 City of Citrus Heights – Household Characteristics



Source: CDC Social Vulnerability Index – map retrieved 9/22/2025

Level of Vulnerability Rating: **Faint Orange** – Low; **Light Orange** – Low/Medium; **Orange** – Medium/High; **Dark Orange** – High; **Grey Hatched** – No Data; **Grey** – Not Available

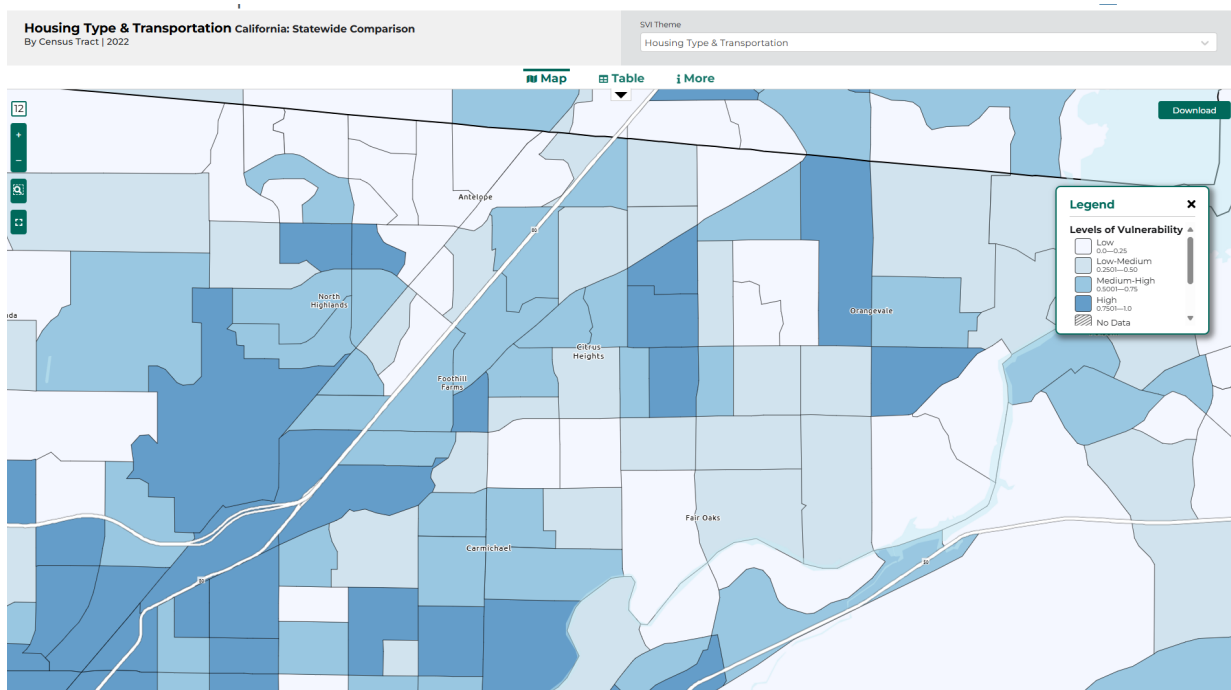
Figure A-6 City of Citrus Heights – Racial and Ethnic Minority Status



Source: CDC Social Vulnerability Index – map retrieved 9/22/2025

Level of Vulnerability Rating: **Faint Purple** – Low; **Light Purple** – Low/Medium; **Purple** – Medium/High; **Dark Purple** – High; **Grey Hatched** – No Data; **Grey** – Not Available

Figure A-7 City of Citrus Heights – Housing Type and Transportation



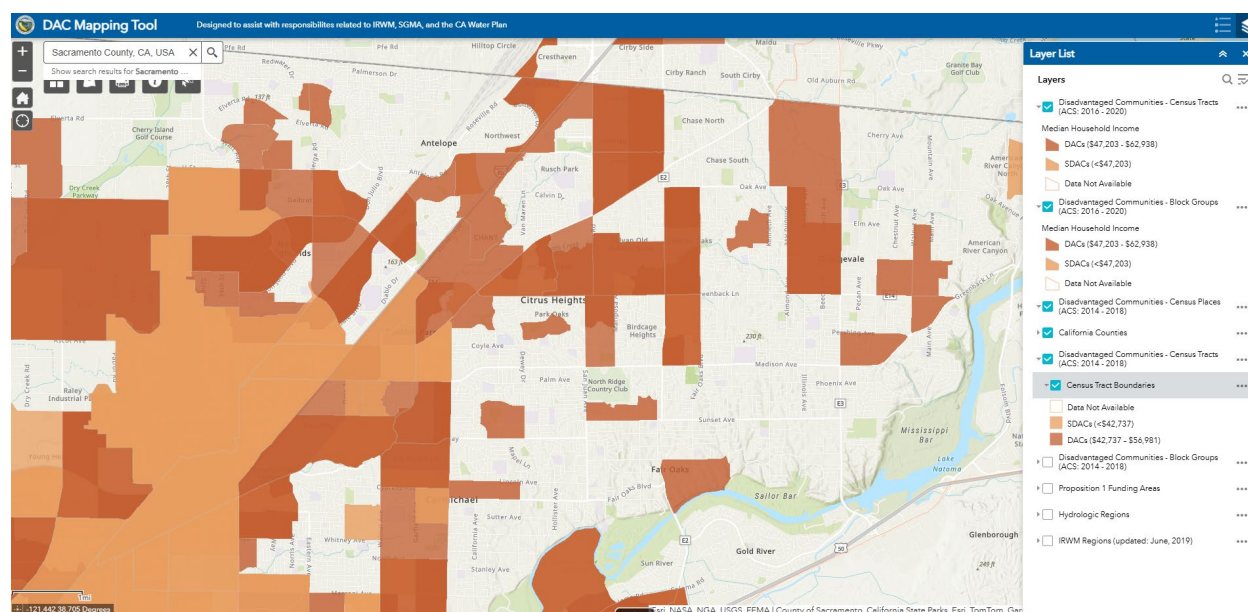
Source: CDC Social Vulnerability Index – map retrieved 9/22/2025

Level of Vulnerability Rating: **Faint Blue** – Low; **Light Blue** – Low/Medium; **Blue** – Medium/High; **Dark Blue** – High; **Grey Hatched** – No Data; **Grey** – Not Available

California DWR Disadvantaged Community Mapping Tool

The State of California’s Proposition 1 Disadvantaged Community (DAC) Involvement Program is designated to ensure the involvement of DACs as well as Economically Distressed Areas and Underrepresented Communities, which DWR collectively refers to as DACs. The Cal DWR definition for a Disadvantaged Community is a community with an annual median household income (MHI) that is less than 80% of the Statewide annual MHI (PRC Section 75005(g)), and those census geographies with an annual MHI less than 60% of the Statewide annual MHI are considered “Severely Disadvantaged Communities”. Those areas in the City considered disadvantaged are shown in Figure A-8. As shown, portions of the City falls in these DAC areas.

Figure A-8 City of Citrus Heights – Disadvantaged Areas



Source: Cal DWR DAC Mapping Tool – retrieved 9/22/2025

City Planning Team Input

The City Planning Team provided additional local input on the vulnerable and underserved populations in the City. This is included in the sections below. The City noted the US Census Bureau has estimates for vulnerable populations in the City. This includes.

- **Elderly:** The City has an older population (65 years and older) of 19.2% (compared to 16.5% for the state of California). The median age of City population is 41.3 compared to 38.4 for the state of California. (Source: U.S. Census Bureau, DP 05 2024 American Community Survey 1-year Estimates).
- **Disabled:** There is a 16.7% disability rate in Citrus Heights. (compared to 12.2% for state of California). Disabilities include: hearing difficulty (4.0%), vision difficulty (1.8%), cognitive difficulty (7.4%), ambulatory difficulty (8.6) self-care difficulty (2.9%) and independent living difficulty (8.6%). (Source: U.S. Census Bureau, S1810 2024 American Community Survey 1-year Estimates).
- **Low Income:** The median income in Citrus Heights is \$91,036 (compared to \$100,149 for the State of California). (Source: U.S. Census Bureau, S1901 2024 American Community Survey 1-year

Estimates). The poverty level in Citrus Heights is 6.8% compared to 11.8% for the state of California. (Source: U.S. Census Bureau, S1701 2024 American Community Survey 1-year Estimates).

- **Migrant Workers:** This data is not readily available from the 2024 US Census; however, there are some known migrant worker population within City of Citrus Heights and are an identified vulnerable population group.
- **Non - English Speaking:** 21.6% of persons aged 5 years and older reported speaking a language other than English at home in Citrus Heights. (Source: U.S. Census Bureau, S1602 2024 American Community Survey 1-year Estimates).
- **Homeless:** Sixty-two (62) individuals were identified as experiencing homelessness by the Point-In-Time (PIT) Count by Sacramento Steps Forward in January 2024. The homeless Information Field Identification (HIFI) conducted by the Citrus Heights Police Department in March 2024 identified 108 individuals experiencing homelessness.

The City is working toward a Climate Adaptation Plan, with a vulnerability assessment, to identify impacts of Climate change on Citrus Heights. It will prioritize multiple vulnerable and disadvantaged communities throughout the City for adaptation to climate change.

Vulnerable Citrus Heights residents face an increased burden due to the impacts of climate change particularly because of financial constraints that limit their ability to adapt and recover. Many residents lack the funds to install or maintain HVAC systems, making them more susceptible to heat-related illnesses during increasingly frequent and severe heatwaves. Additionally, homes in these communities are often underinsured, leaving residents unable to afford necessary repairs after storms or floods. This lack of financial resources exacerbates their vulnerability, as they cannot make their homes resilient to extreme weather events or recover quickly from damages, perpetuating a cycle of hardship and disadvantage.

City of Citrus Heights 2021-2029 Housing Element

The City Planning Team noted that the Citrus Heights 2021-2029 Housing Element discusses special populations in the City. Unique elements from the City's Housing Element are included here.

As a mature suburb with an aging housing stock, both single-family homes and apartment complexes in Citrus Heights face increasing needs for upgrading and maintenance. In the 15 years since incorporation, the City has encountered many rental properties with major deferred maintenance. The City pursues safe and well-maintained neighborhoods through its Neighborhood Enhancement Program, housing programs, and coordination with the community's 10 neighborhood organizations.

The mix of housing found in the City ranges from rural style single-family homes on large lots to standard single-family subdivisions, from townhouses to apartments. The community's affordable home prices and rents make it particularly appealing to young families and its affordable senior housing developments make it attractive to retirees. Preserving and enhancing the range and affordability of housing is an important goal of the General Plan. A goal of this Plan is to continue to address the housing needs of all, including move-up homeowners, first time homebuyers, low - income renters, seniors, disabled persons, and others with special needs.

Structures

This section inventories the parcels (and associated structures) that make up the built environment of the City. The 2025 Sacramento County Assessor's data and the associated parcel layer was used as the basis of this inventory. The methodology used to derive the number of total and improved parcels (i.e., those with an improved structure value) and land and improved property values (as well as content replacement values) follows the same methodology detailed in Section 4.2.1 of the Base Plan. This data should only be used as a guideline to overall values in the City, as the information has some limitations. The most significant limitation is created by Proposition 13. With respect to Proposition 13, instead of adjusting property values annually, the values are not adjusted or assessed at fair market value until a property transfer occurs. As a result, overall value information is most likely low and does not reflect current market value of properties within the City. It is also important to note, in the event of a disaster, it is often the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. However, depending on the type of hazard and impact of any given hazard event, land values may be adversely affected; thus, land values are included as appropriate. Table A-7 shows the Sacramento County Parcel/Assessor Data land and structure values, and content replacement values (e.g., the values at risk) broken down by property use for the City.

Table A-7 City of Citrus Heights – Total Value of Parcels and Structures by Property Use

Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	35	26	\$14,013,195	\$73,460,661	\$73,460,661	\$160,934,517
Church / Welfare	47	39	\$13,863,873	\$52,541,071	\$52,541,071	\$118,946,015
Industrial	25	19	\$14,692,637	\$31,791,918	\$47,687,877	\$94,172,432
Miscellaneous	408	1	\$965,893	\$790,704	\$790,704	\$2,547,301
Office	149	141	\$59,610,695	\$133,406,805	\$133,406,805	\$326,424,305
Public / Utilities	18	0	\$19	\$0	\$0	\$19
Recreational	6	4	\$3,028,930	\$9,504,800	\$9,504,800	\$22,038,530
Residential	24,485	24,281	\$2,718,077,907	\$9,722,827,868	\$4,861,413,934	\$17,302,319,709
Retail / Commercial	370	353	\$334,161,924	\$584,231,800	\$584,231,800	\$1,502,625,524
Unknown	136	0	\$0	\$0	\$0	\$0
Vacant	270	21	\$30,382,899	\$1,441,141	\$0	\$31,824,040
Citrus Heights Total	25,949	24,885	\$3,188,797,972	\$10,609,996,768	\$5,763,037,652	\$19,561,832,392

Source: 2025 Sacramento County Parcel/Assessor Data

Critical Facilities and Infrastructure

Beyond just the buildings and structures that comprise the built environment, it is important to identify the critical facilities and infrastructure that are critical for life safety and property protection. This is done for the City of Citrus Heights below.

For purposes of this plan, a critical facility is defined as:

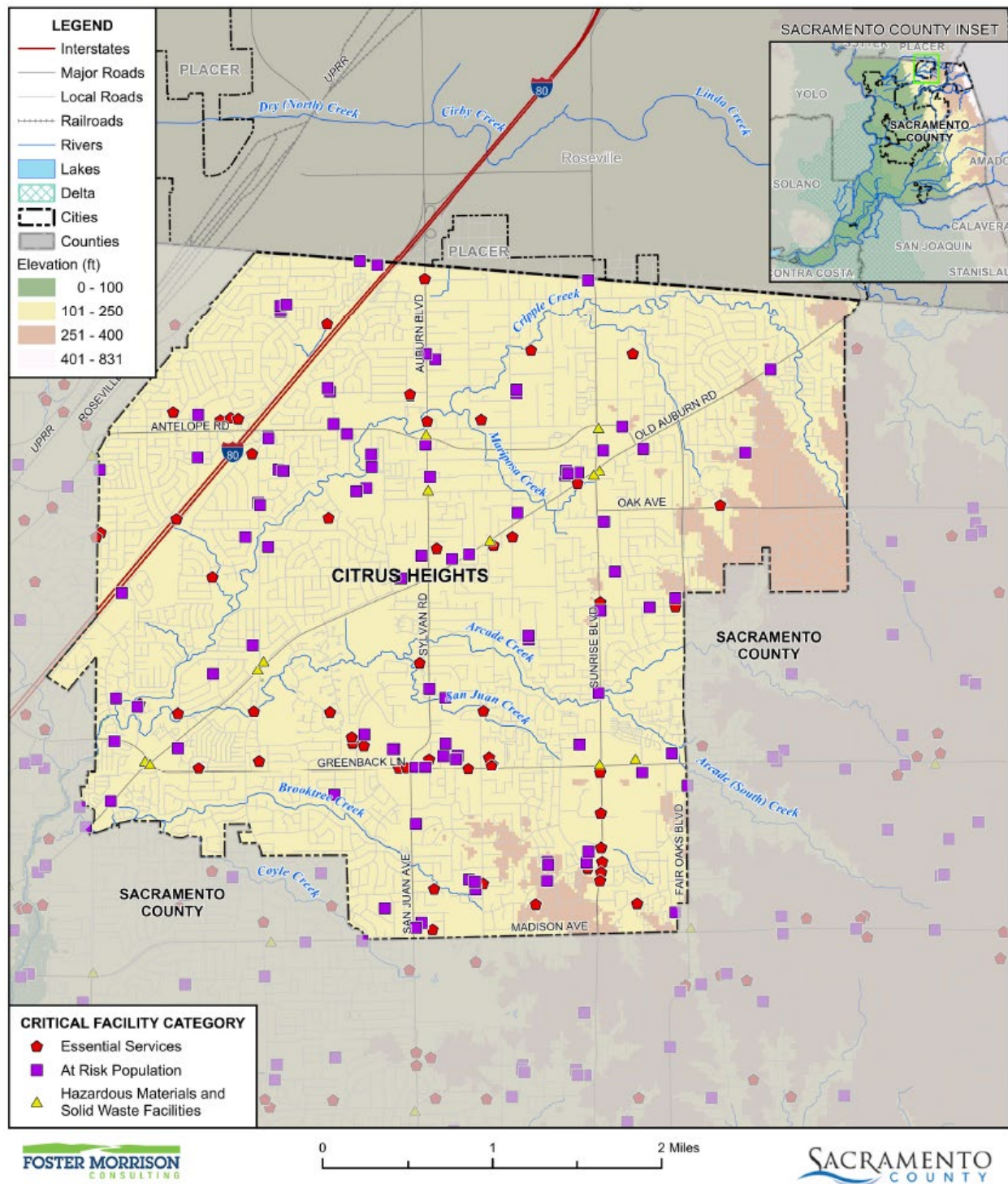
Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.

A critical facility is classified by the following categories: (1) Essential Services Facilities, (2) At-risk Populations Facilities, (3) Hazardous Materials Facilities.

- Essential Services Facilities include, without limitation, public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities and equipment, and government operations facilities.
- At Risk Population Facilities include, without limitation, pre-schools, public and private primary and secondary schools, before and after school care centers with 12 or more students, daycare centers with 12 or more children, group homes, and assisted living residential or congregate care facilities with 12 or more residents.
- Hazardous Materials and Solid Waste Facilities include, without limitation, any facility that could, if adversely impacted, release hazardous materials or waste in sufficient amounts during a hazard event that would create harm to people, the environment and property.

An inventory of critical facilities in the City of Citrus Heights from Sacramento County GIS is shown on Figure A-9. Table A-8 gives summary information about the critical facilities in the City. Table A-9 details the facility categories and breaks them down by facility type.

Figure A-9 City of Citrus Heights – Critical Facilities



Data Source: Sacramento County, Cal-Atlas; Map Date: 4/17/2026.

Table A-8 City of Citrus Heights – Critical Facilities by Category

Critical Facility Category	Facility Count
Essential Services Facilities	76
At Risk Population Facilities	108
Hazardous Materials and Solid Waste Facilities	12
Citrus Heights Total	196

Source: Sacramento County GIS

Table A-9 City of Citrus Heights – Critical Facilities by Category and Type

Critical Facility Category	Critical Facility Type	Facility Count
Essential Services Facilities	Emergency Evacuation Center	8
	EMS Stations	4
	FDIC Insured Banks	13
	Fire Station	5
	Law Enforcement	2
	Microwave Service Towers	17
	Water Well	27
	Total	76
At Risk Population Facilities	Colleges, Universities, and Professional Schools	3
	Day Care Center	27
	Mobile Home Parks	10
	Places of Worship	37
	School	31
	Total	108
Hazardous Materials and Solid Waste Facilities	Leaky Underground Storage Tank	12
	Total	12
Citrus Heights Total		196

Source: Sacramento County GIS

Community Lifelines

Assessing the vulnerability of the City of Citrus Heights to natural hazards and disasters also involves reviewing and inventorying the community lifelines in place that could be affected. It is important to include these items in hazard discussions as the continuous operation of critical government and business functions is essential to human health and safety, property protection, and economic security. The importance of community lifelines is discussed below:

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- FEMA has developed a method for objectives-based response that prioritizes the rapid stabilization of Community Lifelines after a disaster.

- The integrated network of assets, services, and capabilities that provide lifeline services are used day-to-day to support the recurring needs of the community and enable all other aspects of society to function.
- When disrupted, decisive intervention (e.g., rapid re-establishment or employment of contingency response solutions) is required to stabilize the incident.

Community lifelines, as defined by FEMA, include the following:

- **Safety and Security** – Law Enforcement/Security, Fire Service, Search and Rescue, Government Service, Community Safety
- **Food, Hydration, Shelter** – Food, Water, Shelter, Agriculture
- **Health and Medical** – Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management
- **Energy** – Power Grid, Fuel
- **Communications** – Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch
- **Transportation** – Highway/Roadway/Motor Vehicle, Mass Transit, Railway, Aviation, Maritime
- **Hazardous Material** – Facilities, HAZMAT, Pollutants, Contaminants
- **Water Systems** – Potable Water Infrastructure, Wastewater Management

It should be noted that these community lifelines are all in place and functional as part of regular government operations in the Sacramento County Planning Area serving as a partnership between the cities, local special districts and agencies, and Sacramento County. Most all of the City’s community lifelines overlap with the Planning Area’s and include many of the critical facilities and infrastructure assets inventoried for this LHMP. As such, specific information on these community lifelines in the City and how they may be affected by a hazard event or disaster are discussed collectively for all jurisdictions in the Base Plan.

Natural, Historic, and Cultural Resources

Assessing the vulnerability of the City of Citrus Heights to natural hazards and disasters also involves inventorying the natural, historic, and cultural assets of the area. This step is important for the following reasons:

- Environmental and natural resources add to a community’s identity and quality of life. They also help the local economy through agriculture, tourism, and recreation. They support ecosystem services, such as clean air and water.
- Conserving the environment may help people mitigate risk. It can also protect sensitive habitats, develop parks and trails, and build the economy.
- The community may decide that these types of resources warrant a greater degree of protection due to their unique and irreplaceable nature and contribution to the overall economy.
- If these resources are impacted by a disaster, knowing so ahead of time allows for more prudent care in the immediate aftermath, when the potential for additional impacts are higher.
- The rules for reconstruction, restoration, rehabilitation, and/or replacement are often different for these types of designated resources.

- Natural resources can have beneficial functions that reduce the impacts of natural hazards, such as wetlands and riparian habitat, which help absorb and attenuate floodwaters.

Natural Resources

The City contains a variety of natural resources. Natural resources are unique to each area, often provide an important function, and are difficult to replace. Should a natural disaster occur, these species, resources, and locations are at risk.

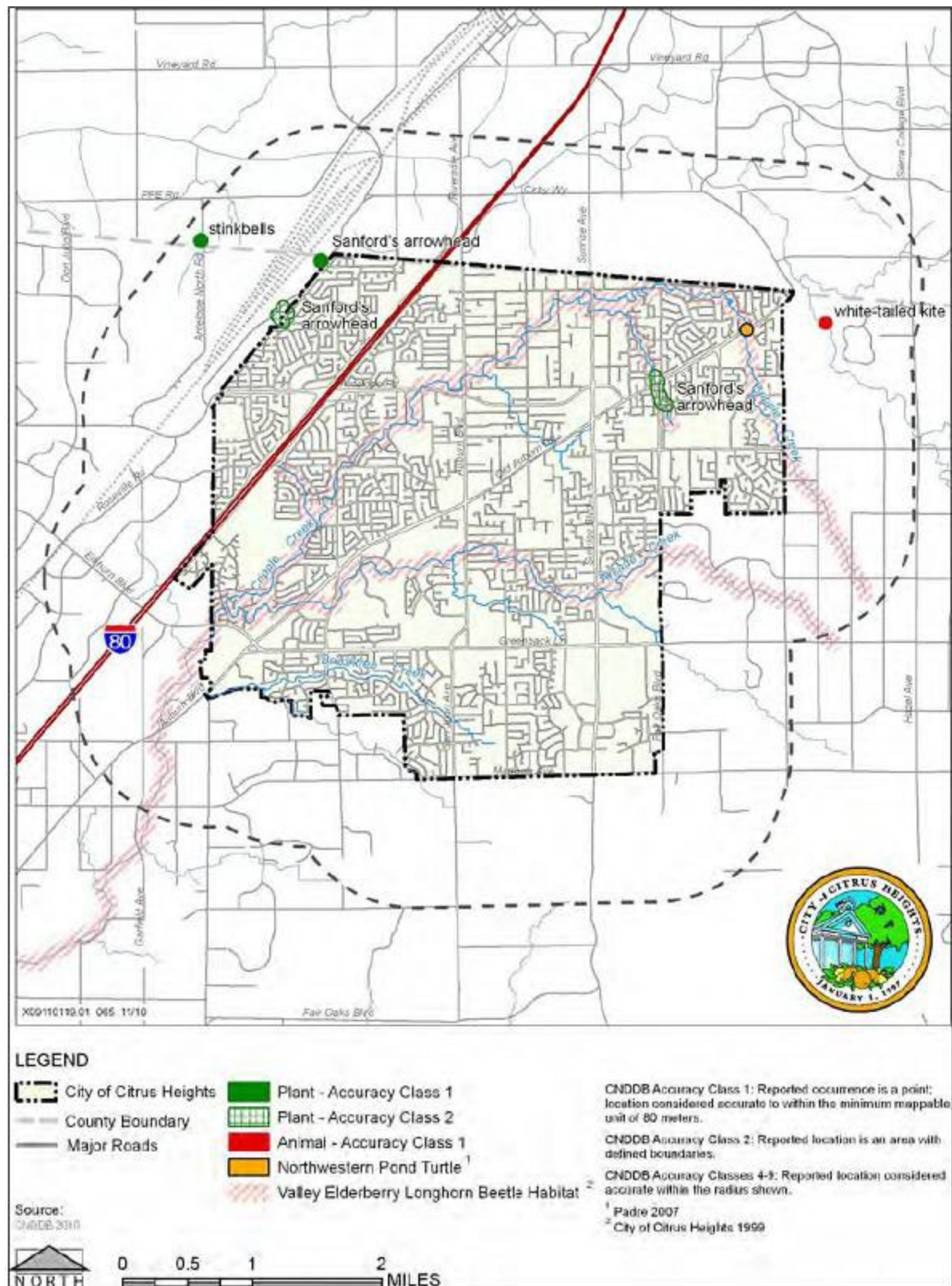
The City of Citrus Heights has a variety of natural resources of value to the community. Table A-10 and Table A-11 depict special status plant and animal species in the City. Figure A-10 shows the location of each of the species.

Table A-10 Special-Status Plant Species Known to Occur or Potentially Occurring in Citrus Heights

Species	Status ¹			Habitat
	USFWS	DFG	CNPS ^{1, 2}	
Bigscale balsam root <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	—	—	1B.2	Could occur; suitable habitat in open areas that support California annual grassland. The nearest known occurrence is approximately five miles away.
Stinkbells <i>Fritillaria agrestis</i>	—	—	4.2	Known to occur; suitable habitat in California annual grassland habitat
Sanford's arrowhead <i>Sagittaria sanfordii</i>	—	—	1B.2	Known to occur; suitable habitat in freshwater marsh along creeks and streams in valley foothill riparian habitat as well slow-moving drainages and ditches
Notes: USFWS = US Fish and Wildlife Service, DFG = Department of Fish and Game, CNPS = California Native Plant Society ¹ CNPS Categories: 1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA) 4 Plants species of limited distribution or infrequent throughout a broader area in California (vulnerability or susceptibility to threat appears low). Uncommon enough that their status should be monitored regularly ² CNPS Extensions: 2 Fairly endangered in California (20% to 80% of occurrences are threatened).				

Source: City of Citrus Heights General Plan Environmental Impact Report (2011)

Figure A-10 Special Status Species Location in Citrus Heights



Source: City of Citrus Heights General Plan Environmental Impact Report (2011)

Table A-11 Special-Status Wildlife Species Known or Potentially Occurring in Citrus Heights

Species	Status ¹		Habitat
	USFWS	DFG	
Invertebrates			
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	–	Could occur; elderberry shrubs are present in valley foothill riparian habitat along Arcade and Cripple creeks
Reptiles			
Northwestern pond turtle <i>Actinemys marmorata</i>	–	CSC	Known to occur; suitable habitat is present in freshwater marshes, rivers, streams, and irrigation ditches within valley foothill riparian habitat.
Birds			
White-tailed kite <i>Elanus leucurus</i>	–	FPS	Known to occur; suitable habitat is present for nesting in trees within the valley foothill riparian and interior live oak habitats and foraging in annual grassland habitat
Mammals			
Palid bat <i>Antrozous pallidus</i>	–	CSC	Could occur; suitable habitat for roosting and foraging is present in valley foothill riparian, interior live oak habitats and annual grassland habitats.
Notes: DFG = California Department of Fish and Game; USFWS = U.S. Fish and Wildlife Service			
¹ Legal Status Definitions			
Federal Listing Categories (USFWS) E Endangered T Threatened (legally protected) C Candidate		State Listing Categories (DFG) E Endangered T Threatened (legally protected) CSC Species of Special Concern FPS Fully Protected Species	

Source: City of Citrus Heights General Plan Environmental Impact Report (2011)

Wetlands and their Natural and Beneficial Functions

Wetlands are habitats in which soils are intermittently or permanently saturated or inundated. Wetland habitats vary from rivers to seasonal ponding of alkaline flats and include swamps, bogs, marshes, vernal pools, and riparian woodlands. Wetlands are considered to be waters of the United States and are subject to the jurisdiction of the U.S. Army Corps of Engineers as well as the California Department of Fish and Wildlife (CDFW). Where the waters provide habitat for federally endangered species, the U.S. Fish and Wildlife Service may also have authority.

Wetlands are a valuable natural resource for communities providing beneficial impact to water quality, wildlife protection, recreation, and education, and play an important role in hazard mitigation. Wetlands provide drought relief in water-scarce areas where the relationship between water storage and streamflow regulation is vital and reduce flood peaks and slowly release floodwaters to downstream areas. When surface runoff is dampened, the erosive powers of the water are greatly diminished. Furthermore, the reduction in the velocity of inflowing water as it passes through a wetland helps remove sediment being transported by the water.

Wetlands are often found in floodplains and depressional areas of a watershed. Many wetlands receive and store floodwaters, thus slowing and reducing downstream flow. Wetlands perform a variety of ecosystem functions including food web support, habitat for insects and other invertebrates, fish and wildlife habitat, filtering of waterborne and dry-deposited anthropogenic pollutants, carbon storage, water flow regulation (e.g., flood abatement), groundwater recharge, and other human and economic benefits.

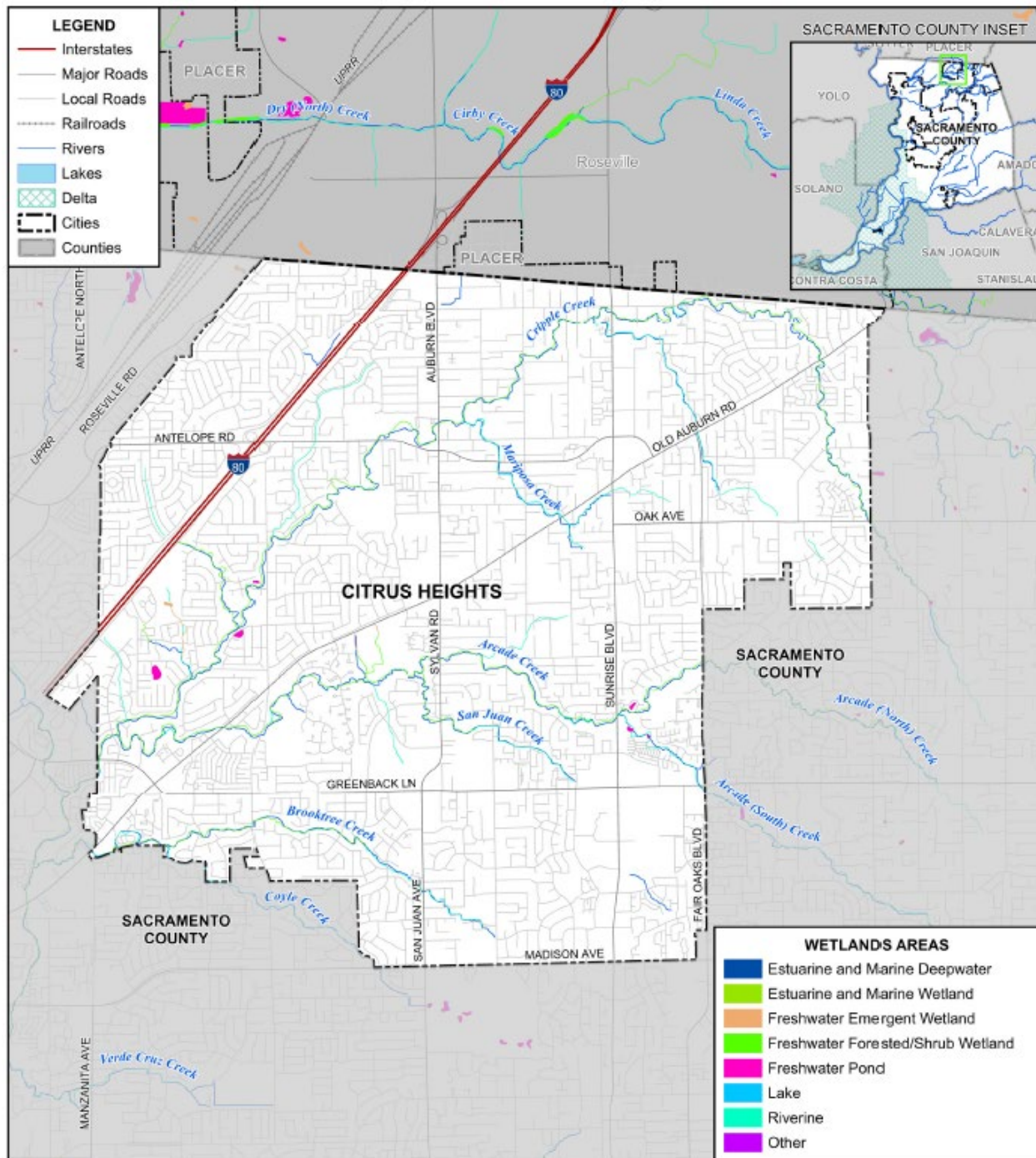
Wetlands, and other riparian and sensitive areas, provide habitat for insects and other invertebrates that are critical food sources to a variety of wildlife species, particularly birds. There are species that depend on these areas during all parts of their lifecycle for food, overwintering, and reproductive habitat. Other species use wetlands and riparian areas for one or two specific functions or parts of the lifecycle, most commonly for food resources. In addition, these areas produce substantial plant growth that serves as a food source to herbivores (wild and domesticated) and a secondary food source to carnivores.

Wetlands slow the flow of water through the vegetation and soil, and pollutants are often held in the soil. In addition, because the water is slowed, sediments tend to fall out, thus improving water quality and reducing turbidity downstream.

These natural floodplain functions associated with the natural or relatively undisturbed floodplain that moderates flooding, such as wetland areas, are critical for maintaining water quality, recharging groundwater, reducing erosion, redistributing sand and sediment, and providing fish and wildlife habitat. Preserving and protecting these areas and associated functions are a vital component of sound floodplain management practices for the City.

Wetlands in the City are shown in Figure A-11 and detailed in Table A-12.

Figure A-11 City of Citrus Heights – Wetlands Areas



FOSTER MORRISON
CONSULTING

0 1 2 Miles

SACRAMENTO
COUNTY

Data Source: U.S. Fish and Wildlife Service National Wetlands Inventory 10/2024 (downloaded 01/2025),
Sacramento County, Cal-Atlas; Map Date: 9/28/2026.

Table A-12 City of Citrus Heights – Wetland Types and Acreages

Jurisdiction / Wetlands Area Type	Wetlands Count	Wetlands Area (in Acres)	% of Total Acres of the Planning Area*	% of Total Acres of the Jurisdiction**
Freshwater Emergent Wetland	8	2	0.004%	2%
Freshwater Forested/Shrub Wetland	461	39	0.1%	53%
Freshwater Pond	50	5	0.01%	6%
Riverine	522	28	0.1%	38%
Citrus Heights Total	1,041	74	0.2%	100%

Source: US Fish and Wildlife Service, 2025.

Historic and Cultural Resources

Historic and cultural resources are difficult to replace. Should a natural disaster occur, these properties and locations can be at risk. The City of Citrus Heights has a stock of historically significant homes, public buildings, and landmarks. The California Department of Parks and Recreation Office of Historic Preservation (OHP) was the primary source of information. OHP administers the National Register of Historic Places, the California Register of Historical Resources, California Historical Landmarks, and the California Points of Historical Interest programs. Each program has different eligibility criteria and procedural requirements. These requirements are detailed in Section 4.2.1 of the Base Plan. Table A-13 shows 1 historic building in the City from the OHP Database.

Table A-13 City of Citrus Heights – Historic Resources

Name (Landmark Plaque Number)	National Register	State Landmark	California Register	Point of Interest	Date Listed	City/Area
Rusch Home (P737)				X	2/11/1991	Citrus Heights

Source: California Department of Parks and Recreation Office of Historic Preservation. Retrieved 12/15/2025.

It should be noted that these lists may not be complete, as they may not include those currently in the nomination process and not yet listed. Additionally, as defined by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), any property over 50 years of age is considered a historic resource and is potentially eligible for the National Register. Thus, in the event that the property is to be altered, or has been altered, as the result of a major federal action, the property must be evaluated under the guidelines set forth by CEQA and NEPA. Structural mitigation projects are considered alterations for the purpose of this regulation.

In addition to the registered sites, there are several assets within Citrus Heights that define the community and represent the City's history. Some of the historical sites of importance to Citrus Heights are listed below and shown in Figure A-12.

14 Mile/Van Maren House

In 1851, the original 14 Mile House was constructed as a roadhouse and way station for teamsters hauling supplies to country mining camps. It is located on Auburn Boulevard approximately halfway between Greenback Lane and Van Maren Lane. The property is surrounded by a modern apartment complex on three sides. The roadhouse was acquired by the Van Maren family and renovated in 1920 to serve as a family residence. An historic survey evaluation completed in 2002 suggests that this may be the oldest wood frame building in Sacramento County. The house is potentially eligible for listing in the California Register of Historical Resources and in the National Register of Historic Places for its potential to yield information as an historic archeological site. The house itself has an information potential regarding early construction in California. The area in the immediate vicinity of the house has potential for deposits associated with the 1850s roadhouse.

Rusch Home

The Rusch Home, built by Citrus Heights pioneers Fred and Julia Rusch, is located in the northwest section of Rusch Park, along Antelope Road. The existing structure was rebuilt in 1914 following a fire that destroyed the original structure. The home and the surrounding land was donated to the community, which led to the establishment of Rusch Park, the City's largest and most prominent park, and the Sunrise Recreation and Park District offices. The home is listed with the State Office of Historic Preservation as a California Point of Historical Interest (SAC-012).

Dekay/Sunrise Ranch Home

The Dekay/Sunrise Ranch home was constructed in 1868 as part of the Sunrise Ranch property in the northern portion of the existing City, along current-day Sunrise Boulevard, named after the property. The home is currently used as a private residence and is one of the oldest residential structures in the area. However, the building has been substantially altered and is not eligible for listing in the California Register of Historical Resources or the National Register of Historic Places due to a lack of historical integrity.

Sylvan School/Citrus Heights Community Club

The old Sylvan School, located south of Sylvan Corners, was initially constructed in 1862, and consisted of a single classroom and two small broom or hat halls. The school was also used as a civic, social, and religious center that supported church services, dancing parties, and local voting discussions. In 1927, the school was moved to another located on Sylvan Road, and the building remains in use as a community meeting hall. The building has been modified, which has resulted in a loss of historic integrity which makes listing in the California Register questionable. However, the historic resources survey done by Rowland Nawi Associates in 2006 found that this property may be suitable for listed as a Point of Historic Interest.

Sylvan Cemetery

Sylvan Cemetery, located along Auburn Boulevard north of Sylvan Corners, was established on land donated in 1862, and first broke ground in 1864. The cemetery has been expanded over the years and currently occupies 18 acres. The site is not currently listed on the National or California Register of Historic

Places, and further research would be necessary to determine its eligibility, particularly since cemeteries must meet special requirements for listing on the National Register.

San Juan High School

San Juan High School was the first secondary school established in Citrus Heights and the northeast part of Sacramento County. San Juan High School is eligible for listing in the National Register of Historic Places and the California Register of Historical Resources as a key institution representing the growth and development of the area of Citrus Heights and as the first high school in the northeast county. It is located at the intersection of Greenback Lane and Mariposa Avenue.

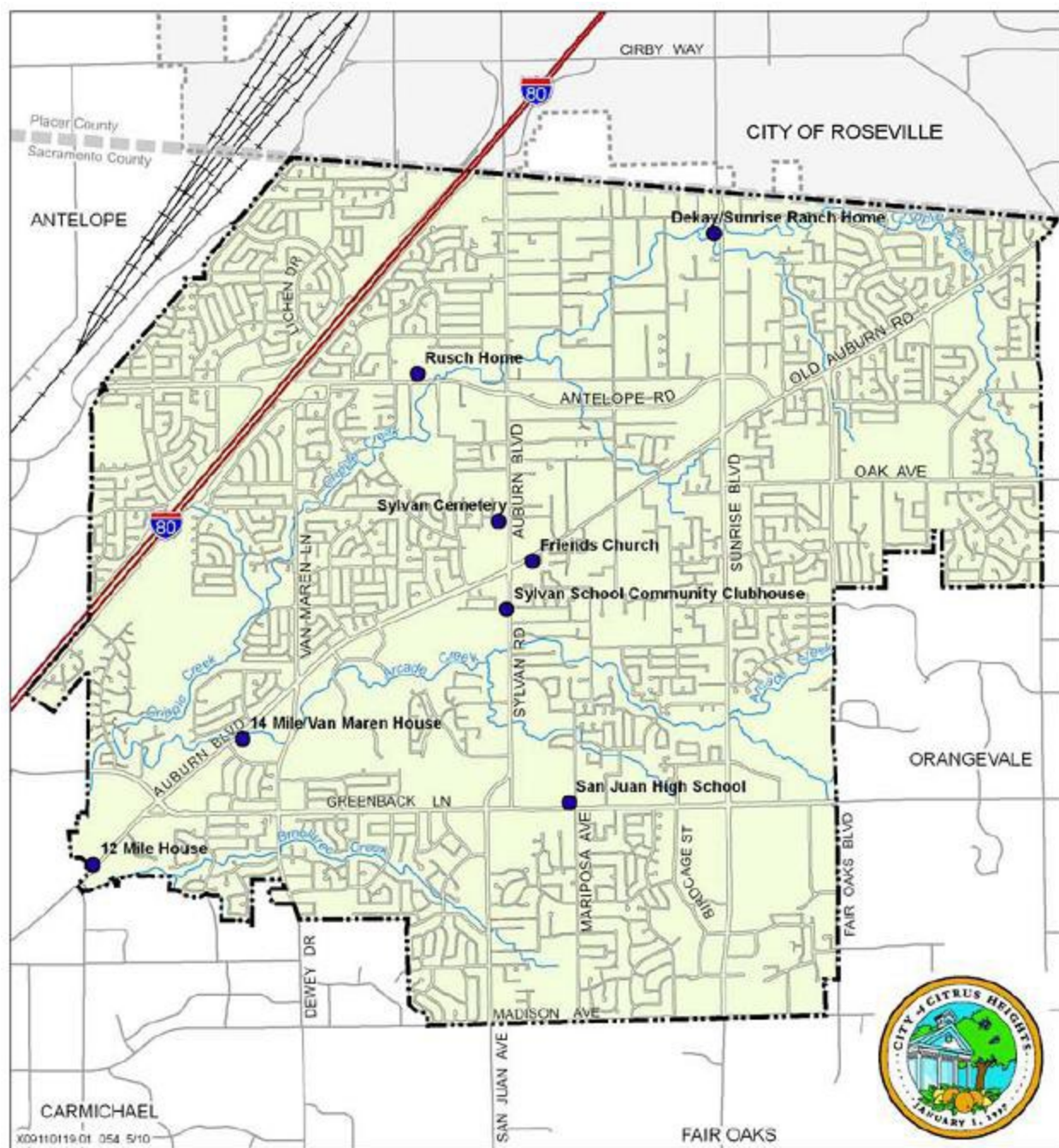
Friends Church

The Friends Church was constructed in 1921, just east of the intersection of Sylvan Road, Auburn Boulevard, and Old Auburn Road. It was the first church built within Citrus Heights. The church has been remodeled twice since its construction and looks different from its original appearance. However, both remodels took place more than 50 years ago, so it is eligible for listing in the California Register of Historical Resources.

12 Mile House

Like the 14 Mile House, the original 12 Mile House was also constructed in the 1800s as a teamster way station. It was located on the south bed of Cripple Creek near present-day DeVechi Road but was rebuilt in the 1920s to accommodate an expansion of Auburn Road. The new 12 Mile House, located at the extreme southwest corner of the planning area, was built and operated as a bar until 1998. The structure is one of the oldest commercial structures in Citrus Heights, and although it has been modified since its construction, this has not significantly compromised its architectural integrity. In addition, the building retains its historical associations to the late 1940s and so appears to be eligible for listing in the California Register of Historical Resources.

Figure A-12 Historic Resources in the City of Citrus Heights



Legend

- | | |
|------------------------|----------------------|
| City of Citrus Heights | Historical Locations |
| County Boundary | Freeway |
| | Creeks |

Source: City of Citrus Heights General Plan Environmental Impact Report (2011)

Economic Assets and Community Activities of Value

Assessing the vulnerability of the City of Citrus Heights to natural hazards and disasters also involves inventorying the economic assets and community activities of value in the City.

Economic Assets

After a disaster, economic resiliency is one of the major drivers of a speedy recovery. Each community has specific economic drivers. These include:

- Primary Economic Sectors
- Major employers
- Commercial Centers

Citrus Heights, California has a strong retail and service-based economy, serving as a major shopping destination for the northeastern Sacramento region. The city lacks large-scale manufacturing or corporate headquarters, instead emphasizing small businesses, chain operations, and logistics. The largest industries by employment in Citrus Heights are:

- Retail Trade
- Health Care & Social Assistance
- Construction

Other significant employment sectors include Accommodation and Food Services, Public Administration, and Professional, Scientific, and Technical Services. Major employers include national retail chains such as Costco Wholesale, Walmart, Target, and Raley's Supermarkets, alongside logistics entities like UPS and Amazon.

Note: This inventory of economic assets is only included in this overall asset inventory for the City. To limit redundancy, it is not discussed further in the hazard profiles and vulnerability assessments in Section A.4.3 below. However, depending on the type, location, magnitude and extent of future hazard events and disasters, these City's economic assets may be vulnerable.

Community Activities of Value

Inventorying economic assets in the City and their vulnerability to natural hazards and disasters also involves inventorying activities that have value to the community. This includes activities that are important to a community, like long-standing traditions such as a festival or fair. Some areas rely on seasonal industries to sustain them throughout the year. Many of these activities also provide economic benefits to the City. A hazard event that cancels or shortens these can affect a community's livelihood and can make disaster recovery more difficult or prolonged. This includes activities such as:

- Festivals and Fairs
- Sporting Events
- Tourism
- Local Pools

Major community activities in Citrus Heights, CA are centered around the Citrus Heights Community Center, Sunrise Mall, and local parks. Key recurring events include the Citrus Heights Community Festival (featuring live entertainment and family activities), Sunday Funday, and the Red, White and Blue Parade. It also includes the California International Marathon.

Note: This inventory of community activities of value only occurs in this overall asset inventory for the City. To limit redundancy, it is not discussed further in the hazard profiles and vulnerability assessments in Section A.4.3 below. However, depending on the type, location, magnitude and extent of future hazard events and disasters, the City's community activities of value may be vulnerable.

Growth and Development Trends

As part of the planning process, the City looked at changes in growth and development, both current and future, and examined these changes in the context of hazard-prone areas, and how the changes in growth and development affect loss estimates and vulnerability over time.

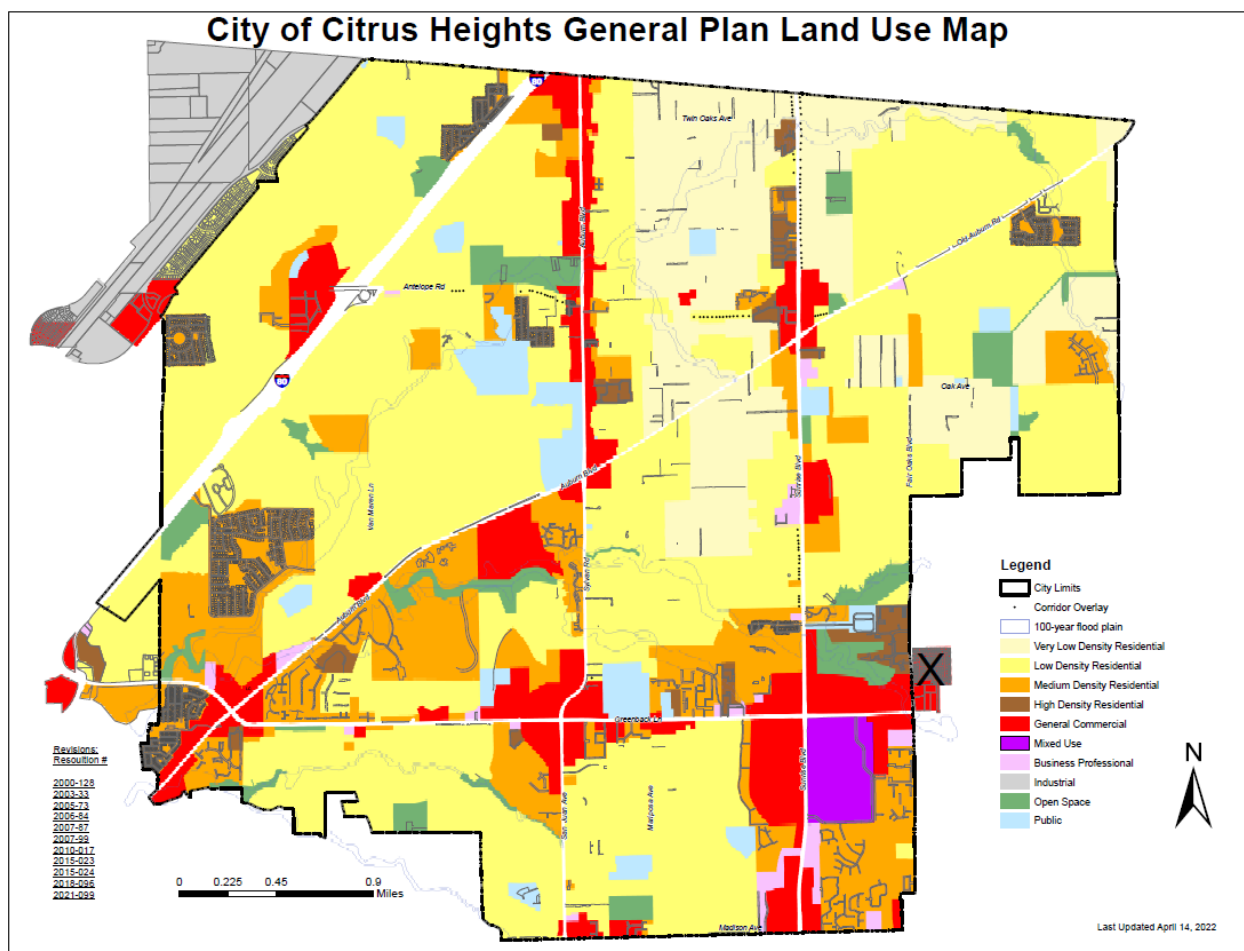
Land Use

State planning law requires that a land use element of a general plan include a statement of the standard population density, building intensity, and allowed uses for the various land use designations in the plan (Government Code Section 65302(a)). The City's land use designations are generally described below and mapped on the Land Use Diagram (Figure A-13). The City of Citrus Heights Municipal Code provides detailed land use and development standards for development.

The Municipal Code works hand in hand with the City's General Plan Land Use Element. The purpose of the Land Use Element is to provide goals, policies, actions diagrams and standards to guide future land use decisions in the City of Citrus Heights. While all elements of the General Plan have equal weight under California law, in some respects this Element is the most far-reaching. It informs all other elements of the General Plan, shaping the future transportation network and the location of future housing sites, and influencing public facility requirements and park and recreation needs. It defines the City's future open space system and responds to natural resource conservation issues and safety hazards. It establishes the basic pattern of development in the City for the next 20-25 years, including land uses and densities, and presents the policies and actions to ensure that future development will enhance the quality of life for all City of Citrus Heights residents.

The Citrus Heights Municipal Code provides detailed land use and development standards for development. Currently, Citrus Heights is about 97 percent built out, meaning not much vacant land remains to be developed. Figure A-13 designates land uses for the Citrus Heights Area (as of April 14, 2022). The land use diagram employs a series of residential and nonresidential land use designations. The land use diagram identifies locations of the land use designations to indicate where certain types of land uses may occur.

Figure A-13 City of Citrus Heights Land Use



Source: City of Citrus Heights website. Retrieved 7/10/2026

Population Trends and Projections

The Sacramento Council on Governments (SACOG) modeled population projections for the City of Citrus Heights and other areas of the region in 2012 for a Metropolitan Transportation Plan/Sustainable Communities Strategy report. This forecast uses a 2008 base year estimate with projections to 2020 and 2035 for population, housing units, households and employment. SACOG estimated the City population in 2020 and 2035 to be 86,057 and 94,242 respectively.

Development since 2021 Plan

As a nearly 98% developed city, Citrus Heights has transitioned from traditional expansion to a sophisticated strategy of infill and commercial revitalization. Over the last five years, the City has transformed its primary corridors—specifically along Auburn Boulevard, Greenback Lane, Antelope Road, and Sunrise Boulevard—through the modernization of major retail hubs like the Sunrise Village, Citrus Grove, and Mitchell Farms shopping centers. This commercial evolution is mirrored by a surge in diverse residential projects, ranging from high-density options like Sunrise Vista Apartments and Fair Oaks Senior Housing to master-planned infill communities such as Mitchell Village, Sayonara, and Wyatt Ranch.

Central to this growth is the City’s pre-approved ADU program, which has streamlined the development of 154 new units, effectively leveraging existing residential lots to meet modern housing demands without compromising neighborhood character.

Development has occurred in the City since the last plan. Some of this has occurred in hazard prone areas. The City Planning Department tracked total building permits issued since 2021 for the City. These are tracked by total development, property use type, and hazard risk area. These are shown in Table A-14 and Table A-15.

Table A-14 City of Citrus Heights – Total Development Since 2021

Property Use	2021	2022	2023	2024	2025
Residential	243	135	44	39	180
Commercial ⁽¹⁾	4	1	2	1	4
Industrial	N/A	N/A	N/A	N/A	N/A
Other ⁽¹⁾	N/A	N/A	N/A	N/A	N/A
Total	247	136	46	40	184

Source: City of Citrus Heights Planning Department

⁽¹⁾ Primarily redevelopment of existing and vacant structures, see paragraph below for a list of significant redevelopment projects.

Source: Community Development Department (design review permits, use permits, building permits database)

Table A-15 City of Citrus Heights – Development in Hazard Areas since 2021

Property Use	1% Annual Chance Flood	X-Protected by Levee Flood Zone	Moderate or Higher Fire Hazard Severity Zones	Other
Residential	1-addition (below substantial improvement threshold)	N/A	N/A	0
Commercial	0	N/A	N/A	0
Industrial	0	N/A	N/A	0
Other	0	N/A	N/A	Trails in SFHA, including bridges. No habitable structures within SFHA.
Total	1 – addition	N/A	N/A	0

Source: General Services Department, building permit conditions.

Recent development since the 2021 LHMP has been primarily occurring outside of identified hazard areas. All development was completed in accordance with current and applicable development codes, including floodplain ordinances, and other applicable standards and should be adequately protected. Thus, with the exception of more people living in the area potentially exposed to natural hazards, this growth should not cause a significant change in vulnerability of the City to identified priority hazards.

Future Development Areas

It is important to review future development plans for the City. Future development should be sited in areas that are away from known hazard risks. If this is not possible, mitigation should be done to ensure that future development is protected against future hazards.

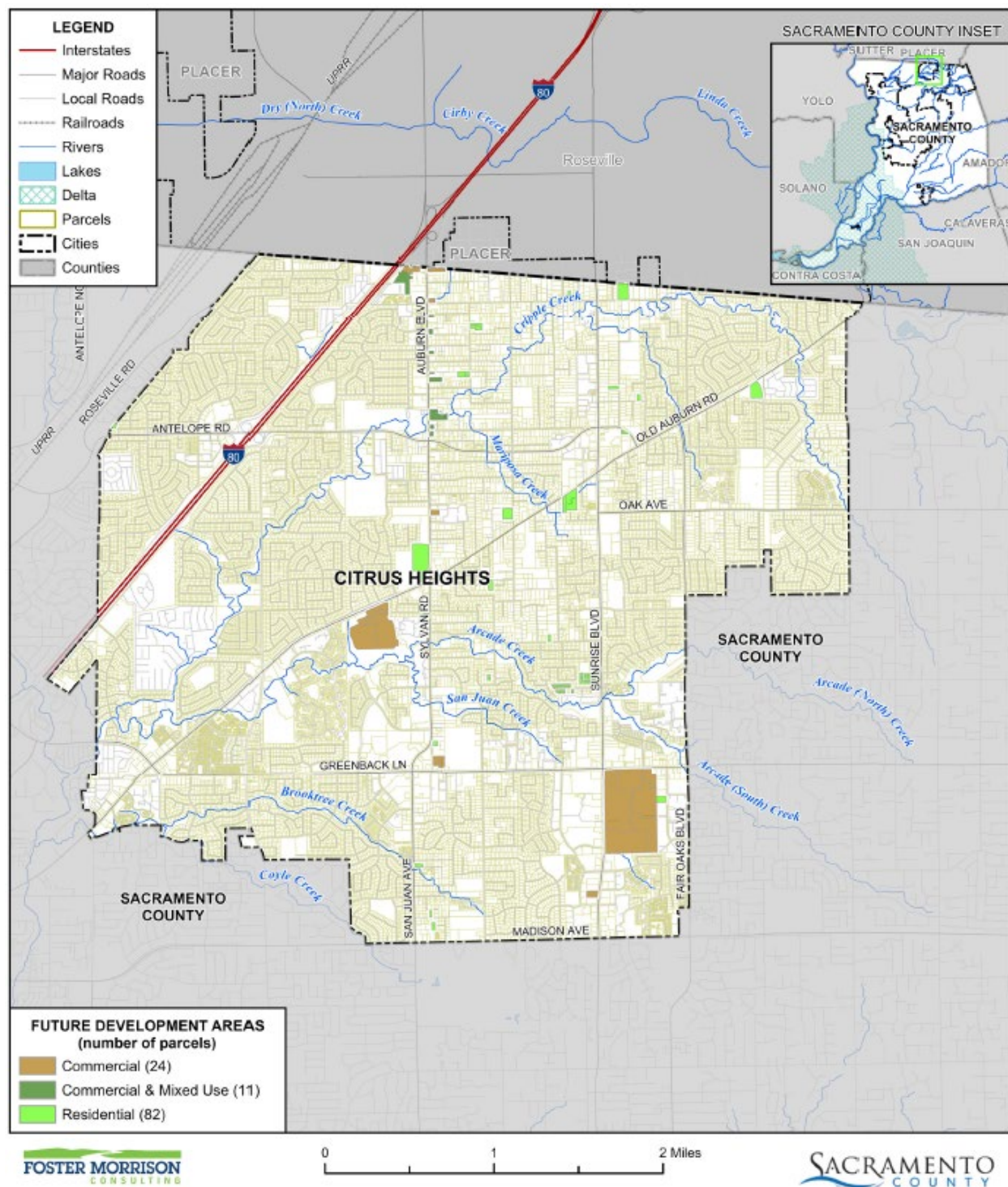
The City noted the following areas where development is occurring.

- Sayonara Drive Housing
 - ✓ **Type:** Residential
 - ✓ **Description:** 26 new affordable single-family homes in partnership with Habitat for Humanity
 - ✓ **Status:** In Construction, anticipated completion in 2027.
- Sunrise Vista Apartments
 - ✓ **Type:** Residential
 - ✓ **Description:** 27 Unit apartment complex.
 - ✓ **Status:** In Construction, anticipated completion in 2026.
- 5525 Sunrise Boulevard
 - ✓ **Type:** Commercial
 - ✓ **Description:** 1.55-acre parcel zoned for Limited Commercial. Parcel approved for development of a future quick serve restaurant location.
 - ✓ **Status:** Entitlement approved- ready for development.
- Sunrise Sports Center (Sunrise Mall / Sunrise Tomorrow):
 - ✓ **Type:** mixed-use sports facility
 - ✓ **Description:** A 160,000 sf facility with a 4,000 seat arena, two NHL-sized ice sheets, and multi-use turf fields
 - ✓ **Status:** Preliminary Financial Agreement Phase
- Sunrise Tomorrow Special Plan Area:
 - ✓ **Type:** Mixed Use
 - ✓ **Description:** 100-acre master plan for retail, dining, residential, and office
 - ✓ **Status:** The Sports Center serves as the catalyst anchor; hotel recruitment is ongoing. The STSP sets the framework for development with a variety of zoning designations, a completed Environmental Impact Report (EIR), and options for streamlined development.
- Wintergreen / Old Auburn Road Subdivision
 - ✓ **Type:** Residential 19 Single Family Homes
 - ✓ **Description:** 19 new single-family homes.
 - ✓ **Status:** Entitlements Phase / Tentative Map.
- Stock Ranch Commercial Center:
 - ✓ **Type:** Commercial
 - ✓ **Description:** a 570,000 sf of commercial area with 2 existing big box retailers
 - ✓ **Status:** Major anchor retailers established (Costco & Walmart). Box retail spaces remain available.
- Sylvan Corners
 - ✓ **Type:** Residential
 - ✓ **Description:** The 11.32-acre parcel was the former location of the Sylvan Middle School, now owned by the City, and is readily available to support housing or commercial development.
 - ✓ **Status:** Vacant-suitable for future project.

GIS Analysis

The City of Citrus Heights provided 36 future development areas which were used as the basis for the inventory of future development for the City. These were mapped in GIS. Figure A-14 show the locations of the future development areas. Table A-16 shows the details of the future development areas organized by future development type (property use) and status, and by map identification area, parcel counts, and acreage.

Figure A-14 City of Citrus Heights – Future Development Areas



Data Source: Sacramento County, Cal-Atlas; Map Date: 9/25/2026.

Table A-16 City of Citrus Heights – Future Development Areas by Type and Status with Parcels and Acres

Future Development Type and Status	Site/Location Name	Total Parcel Count	Improved Parcel Count	Unimproved Parcel Count	Total Acres	Total Improved Acres	Total Unimproved Acres
Commercial							
In Construction	7404 Auburn Blvd	1	1	0	0.9	0.9	0.0
	Funcity Adventure Park	1	1	0	2.0	2.0	0.0
	Twin Oaks Food Truck Plaza	1	1	0	0.6	0.6	0.0
	In Construction Total	3	3	0	3.5	3.5	0.0
Shovel Ready	Starbucks & Retail	1	1	0	1.4	1.4	0.0
	Starbucks @ Stock Ranch	1	0	1	0.9	0.0	0.9
	Shovel Ready Total	2	1	1	2.2	1.4	0.9
Entitlements Phase	CHWD Headquarters	2	0	2	2.7	0.0	2.7
	Sunrise Tomorrow Sports Center	1	1	0	12.4	12.4	0.0
	Entitlements Phase Total	3	1	2	15.1	12.4	2.7
Planned	QSR Sunrise	1	1	0	1.5	1.5	0.0
	Stock Ranch Commercial Center	9	2	7	33.6	24.7	8.8
	Sunrise Tomorrow Special Planning Area	6	6	0	83.4	83.4	0.0
	Planned Total	16	9	7	118.5	109.6	8.8
Commercial Total		24	14	10	139.3	126.9	12.4
Commercial & Mixed Use							
In Construction	CIP - Auburn Boulevard Complete Streets Phase 2	11	9	2	10.9	7.8	3.1

Future Development Type and Status	Site/Location Name	Total Parcel Count	Improved Parcel Count	Unimproved Parcel Count	Total Acres	Total Improved Acres	Total Unimproved Acres
	In Construction Total	11	9	2	10.9	7.8	3.1
Commercial & Mixed Use Total		11	9	2	10.9	7.8	3.1
Residential							
In Construction	Habitat for Humanity Sayonara Subdivision	28	0	28	2.4	0.0	2.4
	Sunrise Vista Apartments	1	0	1	1.4	0.0	1.4
	Wyatt Ranch Subdivision	23	23	0	3.5	3.5	0.0
	In Construction Total	52	23	29	7.3	3.5	3.8
Shovel Ready	Holly Drive 3-SF Dwellings	3	0	3	1.4	0.0	1.4
	Mariposa / Church Ln Subdivision	1	0	1	2.4	0.0	2.4
	Shovel Ready Total	4	0	4	3.8	0.0	3.8
Entitlements Phase	6811 Sunrise Blvd	1	1	0	0.7	0.7	0.0
	6941 Sylvan Road	1	0	1	0.4	0.0	0.4
	7923 Wonder St	1	1	0	0.6	0.6	0.0
	Antelope Road Subdivision	2	0	2	0.4	0.0	0.4
	Dauster Lane Multi-Family	1	0	1	0.4	0.0	0.4
	Sylvan Corners	1	0	1	11.2	0.0	11.2
	Wintergreen / Old Auburn Road Subdivision	1	0	1	3.6	0.0	3.6
	Entitlements Phase Total	8	2	6	17.3	1.3	16.1
Planned	5740 San Juan	1	0	1	0.6	0.0	0.6
	5935 Geoffwood Ct	1	1	0	0.3	0.3	0.0

Future Development Type and Status	Site/Location Name	Total Parcel Count	Improved Parcel Count	Unimproved Parcel Count	Total Acres	Total Improved Acres	Total Unimproved Acres
	7441 Kalamazoo	1	1	0	0.3	0.3	0.0
	7648 Dennis Wy	1	1	0	1.0	1.0	0.0
	7779 Highland Ave	1	1	0	0.4	0.4	0.0
	7820 Old Auburn Road	1	1	0	1.2	1.2	0.0
	7828 Old Auburn Road	4	1	3	4.6	4.6	4.6
	7841 Twin Oaks Avenue	1	1	0	0.6	0.6	0.0
	7939 Hansen Ave	1	1	0	0.4	0.4	0.0
	7975 Twin Oaks Avenue	1	1	0	3.8	3.8	0.0
	8258 Holly Drive	4	1	3	1.6	0.5	1.1
	Greenglen Multi-Family	2	0	2	0.6	0.0	0.6
	Mariposa True-Build	2	0	2	0.4	0.0	0.4
	Planned Total	21	10	11	15.9	13.3	7.2
Residential Total		85	35	50	44.3	18.0	30.8
Grand Total		120	58	62	194.5	152.8	46.3

Source: City of Citrus Heights

A.4.2. Hazard Identification

The City of Citrus Heights identified the hazards that affect the City and summarized their location, extent, likelihood of future occurrence, potential magnitude, and significance specific to the City (see Table A-17). Those hazards identified as a high or medium significance in Table A-17 are considered City of Citrus Heights' priority hazards for mitigation planning. Those hazards that occur infrequently or have little or no impact in the City were determined to be of low significance and not considered a priority hazard. Significance was determined based on the hazard data and profile, focusing on key criteria such as frequency, extent, and resulting damage, including deaths/injuries and property, natural and cultural resources, and economic damage. The ability of a jurisdiction to reduce losses through implementation of existing and new mitigation measures was also considered as to the significance of a hazard. This assessment was used to prioritize those hazards of greatest significance, enabling the City to focus resources where they are most needed.

Table A-17 City of Citrus Heights—Hazard Identification Assessment

Hazard	Geographic Extent	Likelihood of Future Occurrences	Magnitude/Severity	Significance	Climate Change Influence
Aquatic Nuisance Species (plant/animal)	Limited	Occasional	Limited	Low	Low
Climate Change	Extensive	Highly Likely	Limited	Medium	–
Dam Failure	Significant	Unlikely	Limited	Medium	Medium
Drought & Water Shortage (w/tree mortality)	Extensive	Likely	Critical	Medium	High
Earthquake (w/subhazards)	Extensive	Unlikely	Critical	Low	Low
Flood: 1%/0.5%/0.2% annual chance	Significant	Occasional	Limited	Medium	Medium
Flood: Localized Stormwater	Significant	Likely	Limited	Medium	Medium
Landslides, Mudslides, and Debris Flow	Limited	Unlikely	Limited	Low	Medium
Levee Failure	Limited	Unlikely	Negligible	Low	Medium
Sea Level Rise	Limited	Likely	Negligible	Low	High
Severe Weather: Extreme Cold and Freeze	Extensive	Likely	Critical	Medium	Medium
Severe Weather: Extreme Heat	Extensive	Highly Likely	Critical	High	High
Severe Weather: Heavy Rains and Storms (Hail, Lightning, Wind)	Extensive	Highly Likely	Critical	Medium	Medium
Severe Weather: High Winds and Tornadoes	Limited	Likely	Negligible	Medium	Low
Subsidence	Significant	Occasional	Negligible	Low	Medium
Wildfire (with smoke and air quality)	Extensive	Likely	Catastrophic	Medium	High
Geographic Extent Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Likelihood of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year, or happens every year. Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years. Magnitude/Severity Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact Climate Change Influence Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact					

A.4.3. Hazard Profiles and Vulnerability to Specific Hazards

This section includes the hazard profiles and vulnerability assessment for hazards ranked of medium or high significance specific to the City of Citrus Heights (as identified in the Significance column of Table A-17) and also includes a hazard profile for the four primary hazards to the State of California: dam failure, earthquake, flood, and wildfire, regardless of the significance ranking by the City. Chapter 4 of the Base Plan provides more detailed information about these hazards and their impacts on the Sacramento County Planning Area. Methodologies for evaluating vulnerabilities and calculating loss estimates are the same as those described in Section 4.2 of the Base Plan.

Hazard Profiles and Vulnerability Assessment

Each hazard is profiled in the following format:

- **Hazard Profile** – A hazard profile is included for each hazard. This includes information on:
 - ✓ **Hazard Overview** – A general discussion of the hazard and related issues is detailed here.
 - ✓ **Location and Extent** – Location is the geographic area within the City that is affected by the hazard. Extent is the expected range of intensity for each hazard. These are discussed in specific detail for mapped hazards, and in more general detail for those hazards that do not have discrete mapped hazard areas.
 - ✓ **Past Occurrences** – Past occurrences are discussed for each hazard. A discussion of disaster declarations is included in each hazard section. NCDC events are also discussed. Other past occurrences data specific to the City follow the disaster declarations and NCDC events for each hazard.
 - ✓ **Climate Change** – This section contains the effects of climate change (as applicable). The possible influence of climate change on the hazard is discussed.

After the hazard profile, a vulnerability assessment is presented. As part of the vulnerability assessment, an estimate of the vulnerability of the City to each identified hazard, in addition to the estimate of risk of future occurrence, is provided in each of the hazard-specific sections. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

After this classification, a general discussion of hazard vulnerabilities occurs. This is done in the following format:

- **General Vulnerability Discussion** – A general discussion of the hazard and its vulnerability on the City is provided.
- **Local Concerns** – This includes City provided information on how the City is uniquely affected by or vulnerable to each hazard.
- **Assets at Risk** – A discussion of the assets at risk follows, presented in the same order as in Section A.4.1 above, with a few exceptions. This includes sections on: People and Populations; Structures; Critical Facilities and Infrastructure, and Natural, Historic, and Cultural Resources. These are discussed in specific terms for mapped hazards, and in more general terms for those hazards that are unmapped. Sections on Community Lifelines and Economic Assets and Community Activities of Value are not included in the Sections below, as they are fully covered in Section A.4.1 above and in Chapter 4 of the Base Plan.
- **Impacts** – A discussion on hazard impacts follows. Impacts describe how each hazard can affect the City and its assets. The type and severity of impacts reflect both the potential magnitude of the hazard and the vulnerability of the asset.
- **Future Conditions/Future Development** – A discussion of how future conditions and future development may affect the hazard is also included. This is addressed specifically for mapped hazards, and in more general terms for those hazards that are unmapped.

Power Interruption/Power Failure: A Common Vulnerability of all Hazards

An impact or vulnerability of almost all hazards evaluated as part of this LHMP Update relates to power shortage and/or power failures. There are two major power providers in the Sacramento County Planning Area - Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E). The US power grid crisscrosses the country, bringing electricity to homes, offices, factories, warehouses, farms, traffic lights and even campgrounds. According to statistics gathered by the U.S. Department of Energy, major blackouts are on the upswing. Incredibly, over the past two decades, blackouts impacting at least 50,000 customers have increased 124 percent. The electric power industry does not have a universal agreement for classifying disruptions. Nevertheless, it is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. In addition to blackouts, brownouts can occur. A brownout is an intentional or unintentional drop in voltage in an electrical power supply system. Intentional brownouts are used for load reduction in an emergency. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. More information on types of power disruptions can be found in Section 4.3 of the Base Plan.

Public Safety Power Shutoff (PSPS)

An intentional disruption type of power shortage/failure event has been recently implemented in California as a result of wildfires starting as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are preparing all Californians for the threat of wildfires and power outages during times of extreme (fire) weather. To help protect customers and communities during extreme fire weather events, electric power may be shut off for public safety in an effort to proactively prevent wildfire. This is called a PSPS. More information on PSPS criteria can be

found in Section 4.3 of the Base Plan. SMUD noted that it has had no PSPS events for its service territories. PG&E had no events since the 2021 LHMP.

Local Concerns

The City has not been affected by PSPS events, however; severe weather has caused numerous power outages impacting residents and public infrastructure (such as traffic signals, street lights and other safety devices). Power outages have occurred in heavy wind and rainstorms, as described in the Local Flooding section of this worksheet. Some critical City facilities (e.g. City Hall) do not have on-site generator power during outages, which disrupts services and staff ability to quickly respond to crisis. During power outages, staff move all necessary equipment to a City facility nearby which does have on-site generator capacity. Additionally, with an increase in climate change related issues (e.g., extreme heat conditions, atmospheric river storms) occurring in the Sacramento County Planning Area, the potential for future hazard related power outages remain a concern.

Hazard Profiles and Vulnerability Assessment by Hazards

The following sections provide the hazard profile and vulnerability assessments for each of the hazards identified in Section A.4.2 Hazard Identification.

Climate Change

Likelihood of Future Occurrence—Highly Likely

Vulnerability—Medium

Hazard Profile

Climate change adaptation is a key priority of the State of California. The 2023 State of California Multi-Hazard Mitigation Plan noted that climate change is affecting California. Sea levels have risen by as much as seven inches along the California coast over the last century, increasing erosion and pressure on the State’s infrastructure, water supplies, and natural resources. The State has also seen increased average temperatures, more extreme hot days, fewer cold nights, a lengthening of the growing season, shifts in the water cycle with less winter precipitation falling as snow, and earlier runoff of both snowmelt and rainwater in the year. In addition to changes in average temperatures, sea level, and precipitation patterns, the intensity of extreme weather events is also changing.

California’s Adaptation Planning Guide: Understanding Regional Characteristics (from 2017) has divided California into 11 different regions based on political boundaries, projected climate impacts, existing environmental setting, socioeconomic factors and regional designations. The City falls in the North Central Valley Region. A map and climate projections for this region are shown in Section 4.3.7 of the Base Plan and include an increase in temperatures, moderate changes in rainfall, and increased risk to wildfire.

Location and Extent

Climate change is a global phenomenon. It is expected to affect the whole of the City of Citrus Heights, the Sacramento County Planning Area, surrounding counties, and State of California. There is no scale to

measure the extent of climate change. Climate change exacerbates other hazards, such as drought, extreme heat, flooding, wildfire, and others. The speed of onset of climate change is very slow. The duration of climate change is not yet known but is feared to be tens to hundreds of years.

Past Occurrences

Disaster Declaration History

Climate change has never been directly linked to any declared disasters.

NCDC Events

NCDC does not track climate change events.

City of Citrus Heights Events

The City has experienced no tangible impacts or occurrences from Sea Level Rise to date. However, due to the slow progression of climate change, the City has likely seen some past events of hazards where climate change has influenced those events. Those are discussed in other Past Occurrence sections below.

Vulnerability to Climate Change

The whole of the City is at some measure of vulnerability to climate change. The City Planning Team has concerns that the vulnerability of the City to climate change will continue to increase in the future. An assessment of a community's vulnerability to climate change begins with an understanding of local exposure to climate change. This is included in the Local Concerns section below followed by a discussion of the City's assets at risk and impacts to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Climate change has impacted the City and is expected to have ongoing impacts contributing to the increase chance and intensity of the various hazards identified within the City's Hazard Identification Table as shown in Table A-17. Long term secondary consequences related to Climate Change include human health and safety risks, economic disruptions, diminished water supply, shifts in ecosystem function and habitat qualities, damaged infrastructure, and difficulties with provision of basic services. Vulnerable populations make up almost half of the City population and are particularly susceptible to the risks of Climate Change. The City of Citrus Heights needs to address the anticipated impacts of Climate Change specific to their community.

Assets at Risk

Assets at risk from climate change include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

Climate change affects people and populations within a community, especially those climate change issues related to increases in temperature over time. While all populations can be affected by temperature extremes, populations particularly vulnerable include the very old and very young, medically fragile people, people without means of shelter (and air conditioning or heat) or transportation, people who are socially isolated and other vulnerable or underserved populations (as shown in the discussion in Section A.4.1). Acclimatization to extreme temperatures and other weather extremes may help reduce impacts from these extreme events, such as from heat waves, in the healthy general population but may not be sufficient to protect those with underlying medical conditions.

Structures

Climate change, on its own, does not generally impact structures. However, structures in areas of increased flood, wildfire, or other areas exacerbated by the effects of climate change would be at increased risk, as described in the other hazard sections throughout this LHMP.

Critical Facilities and Infrastructure

As with structures, critical facilities and infrastructure in areas of increased wildfire, flood, or other areas due to the effects of climate change would be at increased risk. Climate change is expected to increase the vulnerability of critical facilities and infrastructure to many natural hazards.

Natural, Historic, and Cultural Resources

The rivers, streams, and open space areas of the City supports rich biodiversity, including many special-status species and habitat areas. These are all at risk from the effects of climate change. In addition, if heat continues to contribute to changes in wildfire patterns, all areas (on land) of the City are at increased risk from fire – including natural, historic, and cultural resources. Furthermore, as climate change exacerbates the drought hazard, areas of wetlands in the City may be reduced or dry up temporarily, which could damage habitat areas for waterfowl and other species that depend on these areas.

Impacts from Climate Change

The California APG: Understanding Regional Characteristics identified the following impacts specific to the North Central Valley Region in which the City is part of:

- Increased temperatures
- Reduced precipitation
- Public health – heat and air pollution
- Reduced agricultural productivity
- Inland flooding
- Reduced tourism

In addition to these sources, the 2023 State of California Hazard Mitigation Plan noted that according to California’s Fourth Climate Change Assessment, the state will experience the following climate impacts:

- Annual average daily high temperatures are expected to rise by 2.7° F by 2040, 5.8°F by 2070, and 8.8°F by 2100 compared to observed and modeled historical conditions. These changes are statewide averages.
- Heat waves are projected to become longer, more intense, and more frequent.
- Warming temperatures are expected to increase soil moisture loss and lead to drier conditions. Summer dryness may become prolonged, with soil drying beginning earlier in the spring and lasting longer into the fall and winter.
- Droughts are likely to become more frequent and persistent through 2100.
- The strength of the most intense precipitation and storm events affecting California is expected to increase.
- Snowpack levels are projected to decline significantly by 2100 due to reduced snowfall and faster snowmelt.
- Marine layer clouds are projected to decrease.
- Extreme wildfires (i.e., fires larger than 24,710 acres) would occur 50 percent more frequently. The maximum area burned statewide may increase 178 percent by the end of the century.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile section above), changes in population patterns, and changes in land use and development. The influencing effects of these factors on this hazard are discussed further in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City include the following:

- As climate change continues to accelerate over time, climate related impacts to the City will continue to increase.
- Climate change can influence population growth in the City over time. While the City is expected to see slow and steady growth, the City could see population fluctuations as a result of climate impacts relative to those experienced in other regions, and these fluctuations are expected to impact demand for housing and other development. The City has 36 areas where future development is expected to occur in the next five years. Changes in population and population patterns that would come with the 36 future development areas would likely increase the impacts associated with this hazard. Additionally, climate change may also influence future population growth in the City and County.
- Land use planning should be proactive to address future hazard conditions. The City has 36 areas where future development is expected to occur in the next five years. The increasing severity and frequency of storms and other weather events and natural hazards due to the changing climate should be taken into account while considering land use planning and development in the City. Changes in land use and development may or may not increase the impacts and associated vulnerabilities of the City to this

hazard depending on where and how this future growth occurs and the extent of future climate change influence in the City.

Future Development

Future development considerations should be ongoing and proactive. Ensuring that comprehensive land use planning is conducted, regulatory requirements, such as building codes, are followed, and varying needs for different demographic groups that reside within the City are considered can help to make for a more disaster resilient community.

Dam Failure

Likelihood of Future Occurrence–Unlikely

Vulnerability– Medium

Hazard Profile

Dams are manmade structures built for a variety of uses including flood protection, power generation, agriculture, water supply, and recreation. When dams are constructed for flood protection, they are usually engineered to withstand a flood with a computed risk of occurrence. For example, a dam may be designed to contain a flood at a location on a stream that has a certain probability of occurring in any given year. If prolonged periods of rainfall and flooding occur that exceed the design requirements, that structure may be overtopped or fail. Overtopping is the primary cause of earthen dam failure in the United States. In addition, with storms increasing in volume and intensity, as seen with the atmospheric river events of recent years, controlled releases from dams can also impact downstream levees and flood control structures resulting in increased and widespread flooding.

Dam failures, for purposes of this Plan, can also result from any one or a combination of the following:

- Earthquake
- Overtopping and uncontrolled releases
- Controlled releases
- Inadequate spillway capacity resulting in excess overtopping flows
- Internal erosion caused by embankment or foundation leakage, or piping or rodent activity
- Improper design
- Improper maintenance
- Negligent operation
- Failure of upstream dams on the same waterway

Dam failure is a natural disaster from two perspectives. First, the inundation from released waters resulting from dam failure is related to naturally occurring floodwaters. Second, a total dam failure would most probably happen as a consequence of the natural disaster triggering the event, such as an earthquake.

Location and Extent

An inventory map of dams located within and around Sacramento County was shown in Section 4.3.8 in the Base Plan. Inundation mapping and analyses were conducted on Extremely High and High Hazard

dams with inundation areas located in the Sacramento County Planning Area. None of the mapped dams intersect the City of Citrus Heights. As such, no mapping or tabular analysis is presented. However, based on the Folsom dam inundation analyses included in the 2021 and 2016 Sacramento County LHMPs, areas of the City fall within previous dam inundation areas for Folsom. It is thus assumed that, while not quantified, the City remains at risk and vulnerable to a future Folsom dam incident.

There is no scale with which to measure dam failure. However, FEMA and CA DWR Division of Safety of Dams (DSOD) assign hazard potential classifications to dams within the State that provides information on the potential impact should a dam fail. The following two factors are considered when assigning hazard ratings: existing land use and land use controls (zoning) downstream of the dam. FEMA categorizes the downstream hazard potential into three categories in increasing severity: Low, Significant, and High. DSOD adds a fourth category of Extremely High. Dams are classified in these four categories that identify the potential hazard to life and property. These were discussed in more detail in Section 4.3.8 of the Base Plan.

While a dam may fill slowly with runoff from winter storms, a dam break has a very quick speed of onset. The duration of dam failure is generally not long – only as long as it takes to empty the reservoir of water the dam held back. For dam overtopping, the speed of onset is somewhat slower than that of a dam break, and the duration is longer (as evidenced in the 2017 Oroville Dam spillway event). The City would be affected for as long as the flood waters from the dam failure took to drain downstream.

Past Occurrences

Disaster Declaration History

There have been no state or federal disaster declarations for dam failure in Sacramento County.

NCDC Events

The NCDC does not contain any dam failure events for Sacramento County.

City of Citrus Heights Events

The City Planning Team noted no past occurrences of dam failure to affect the City.

Climate Change and Dam Failure

It is likely that climate change will increase the chance of future occurrence as well as future impacts associated with dam failure. More information on future impacts to the City can be found below and in the Future Conditions/Future Development section of the Vulnerability Assessment below.

The 2023 California State Hazard Mitigation Plan noted that modeling described in California's Fourth Climate Change Assessment projects less frequent but more extreme daily precipitation. Year-to-year precipitation will become more volatile, and the number of dry years will increase by mid-century. As the climate continues to warm, atmospheric rivers will carry more moisture, and extreme precipitation may increase. Climate model projections show a tendency for the northern part of the State to become wetter.

Increases in both precipitation and heat causing snow melt in areas upstream of dams could increase the potential for dam failure and uncontrolled releases in Sacramento County. The City could be affected by these changes, especially in those areas of the City located within dam inundation areas.

The 2024 Sacramento County CAP noted that climate change is likely to lead to changes in the frequency, intensity, and duration of extreme weather events. The County is projected to experience a steady increase in average annual precipitation through the end of the century, with much of that precipitation likely to occur during extreme precipitation events, which can lead to flood impacts. According to Cal-Adapt, the historic average annual precipitation in Sacramento County is 18.3 inches, and the historic average annual number of extreme precipitation events is four. The average annual precipitation across the County may rise upwards of 22 inches, with the number of extreme precipitation events potentially exceeding 7 per year by the end of the century, depending on the level of current and future GHG emissions.

In general, California exhibits “booms and busts,” which refers to the existence of both very wet years and very dry years. The amount of precipitation that falls in any particular year is largely influenced by occurrences of large, discrete winter storms, also known as atmospheric rivers, which often provide a substantial fraction of the region’s annual precipitation, inclusive of the County. In California, atmospheric rivers vary in intensity; some are beneficial for water supply and replenish snowpack that naturally melts during the summer, serving as the water supply for people and agriculture, while others are responsible for widespread and adverse impacts (NOAA 2023). Extreme precipitation from these atmospheric rivers in the future may prove to be more variable, volatile, and potentially more severe. These extremes are most likely to occur during storm events, leading to more severe damage from waves and floods, thus possibly leading to more dam failure events.

Vulnerability to Dam Failure

The vulnerability of the City to dam failure flooding would vary depending on which dam fails and the nature and extent of the dam failure and associated flooding. The primary danger associated with dam failure is the high velocity flooding of those properties downstream of the dam. A dam failure can range from a small, uncontrolled release to a catastrophic failure. Vulnerability to dam failures is generally confined to the areas subject to inundation downstream of the facility. Secondary losses would include loss of the multi-use functions of the facility and associated revenues that accompany those functions. Dam failure flooding would vary by community depending on which dam fails and the nature and extent of the dam failure and associated flooding.

An assessment of a community’s vulnerability to dam failure begins with an understanding of local exposure to dam failure. This is included in the Local Concerns section below followed by a discussion of the City’s Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

General Concerns

The City is most concerned with a failure of the Folsom Dam. However, the City also is downstream from a state-jurisdictional dam, Lake Oroville. The California Department of Water Resources provides an example – a failure of Lake Oroville Dam could produce multi-hundred-foot flood waves in the Sacramento River Valley, potentially reaching Citrus Heights if the breach were large enough and timing aligned with high water. The City has an Emergency Action Plan for protecting residents, staff and visitors during emergencies such as wildfires, floods, or other disasters. It includes a downloadable guide encouraging all households to prepare for an emergency. It includes official information sites and where to get help and resources. Evacuation routes can be accessed on the City’s website.

Assets at Risk

Assets at risk from dam failure include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All people and populations located in dam inundation areas are vulnerable to dam failure. Certain vulnerable populations may be at increased risk to dam failure, especially during a large event with minimal advance notice. These vulnerable populations may include: the unsheltered, those with limited mobility, and those that lack the resources to leave the area. While not currently mapped, this includes those populations impacted by a future Folsom dam incident.

Structures

Most structures in the City have some measure of risk to dam failure. Dam failure flooding can affect the built environment of the City. Structures in dam inundation areas are at risk and depending on flood depths, can range from slight damage to totally inundated. While not currently mapped, this includes those structures impacted by a future Folsom dam incident.

Critical Facilities and Infrastructure

Dam failure flooding presents a threat to critical facilities and infrastructure. For example, transportation routes, including bridges and highways, are vulnerable to dam inundation and have the potential to be unpassable and even destroyed, creating isolation and supply chain issues. Those critical facilities that are most vulnerable include those that are already in poor condition and would not be able to withstand a large water surge. While not currently mapped, this includes those critical facilities and infrastructure impacted by a future Folsom dam incident.

Natural, Historic, and Cultural Resources

A major dam failure event and associated flooding could have a devastating impact on the City. Large flood events can affect all natural, historic, and cultural resources that lie in the dam inundation areas. There are a number of ways floodwaters associated with a dam failure event can impact natural resources and the environment: Wildlife habitats can be destroyed by floodwaters. Contaminated floodwater can pollute

ivers and habitats. Silt and sediment can destroy natural areas. Riverbanks and natural levées can be eliminated as rivers reach bankfull capacity. Rivers can be widened, and deposition can increase downstream. Trees can be uprooted by high-velocity water flow. Plants that survive the initial flood may die due to being inundated with water. Historic and cultural resources may also be affected. Generally, the impacts are associated with damage to these structures within the inundated areas, but other cultural resources such as those associated with Native Americans and old tribal areas can also be disturbed, damaged, and lost during extreme dam failure flood events.

Impacts from Dam Failure

Impacts to the City from dam failure flooding could be extensive and widespread and include loss of life and injury, flooding and damage to property and structures, damage to critical facilities and infrastructure, loss of natural resources, and all other flood related impacts. Additionally, mass evacuations and associated economic losses can also be significant.

Other impacts associated with dam failure include landslides, bank erosion, and destruction of habitat. Dam failures can cause downstream flooding and can transport large volumes of sediment and debris and contaminants from the floodwaters. Other environmental impacts can include contamination from septic system failures and releases of contaminants from hazardous materials facilities, contamination of potable water supplies; changes in configurations of streams; loss of wildlife habitats; and degradation of wetlands. A large dam failure event could have significant and catastrophic impacts.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the Climate Change and Dam Failure discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City include the following:

- Climate change is likely to exacerbate future rain and storm conditions and associated impacts and vulnerability of the City to dam failure. This was discussed in greater detail in the Climate Change and Dam Failure section of the Hazard Profile above.
- The City is expected to see slow and steady growth, and this additional growth within the dam inundation areas of the City would place additional populations at risk to dam failure. Many of the 36 future development areas would likely fall in the unmapped Folsom dam area, which would raise the population residing or working on those areas. Additional population growth would likely bring

continued diversity to the City. Vulnerable population groups could face disproportionate effects from a dam failure and should be planned for. Changes in population and population patterns that will come from new development will place more people within the dam inundation areas and would likely increase the impacts and vulnerability of the City to this hazard.

- Land use planning should be proactive to address future hazard conditions. Locating new development, structures, and critical facilities and infrastructure within or near areas of dam failure risk will put additional development at risk. 36 locations are expected to be developed in the next five years. Many of these fall inside of the unmapped Folsom dam areas. City building codes are in effect to partially reduce this risk and should be updated as necessary to continue to address future dam failure conditions. Changes in land use and future development is likely to increase the impacts and associated vulnerabilities of the City to this hazard.

Future Development

Future dam failure events may occur in the City. Given the number of affected parcels and structures, future development in the City would likely be affected by dam failures and associated flooding. Siting of future development areas should take dam failure flooding into account. The City enforces its floodplain ordinance, which helps to reduce risk to flooding by requiring structures to be above the base flood elevation which, depending on inundation depths, may provide some relief.

Future development areas and their vulnerability to dam failure are not discussed further, as no mapped inundation zones exist in the City. As such, no maps or tabular analysis is presented.

Drought & Water Shortage (w/Tree Mortality)

Likelihood of Future Occurrence—Likely

Vulnerability—High

Hazard Profile

Drought and water shortage are complex issues involving many factors—it occurs when a normal amount of precipitation is not available to satisfy an area’s usual water-consuming activities. Drought can often be defined regionally based on its effects. Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water supply is the most significant issue and is critical for agriculture, manufacturing, tourism, recreation, and commercial and domestic use. Drought has also affected tree mortality in the area in the past. As the population in the area continues to grow, so will the demand for water.

Tree Mortality and Drought

One of the specific impacts of drought in the City of Citrus Heights and the Sacramento County Planning Area is the increased risk to trees from insects, pathogens and parasites, and other tree mortality and die back issues. Drought weakens trees and makes them more susceptible to insect infestation and other pathogens. Insects, such as bark beetles and others, frequently attack trees weakened by drought, disease, injuries, or other factors that may stress the tree. These insects and other pathogens can contribute to the

decline and eventual death of trees throughout the City. The tree mortality and dieback problems are a high priority because of the issue of hazardous trees and an increased wildfire hazard. In addition to an increase in wildfire fuels, hazardous trees can fall onto structures causing damage and result in a reduction on the tree canopy within the City that provides relief during extreme heat days.

Location and Extent

Drought and water shortage are regional phenomenon. The whole of the City and County is at risk. The US Drought Monitor categorizes drought conditions with the following scale:

- None
- D0 – Abnormally dry
- D1 – Moderate Drought
- D2 – Severe Drought
- D3 – Extreme Drought
- D4 – Exceptional Drought

The Sacramento County Planning Area, including the City of Citrus Heights, has been in and out of drought since 2014. Over the last seven years since the 2021 LHMP, drought conditions have ranged from none to exceptional. Drought conditions are expected to continue to be cyclical in nature depending on the year.” Current drought conditions in the City are shown in Section 4.3.9 of the Base Plan.

Drought has a slow speed of onset and a variable duration. Drought can last for a short period of time (which does not usually affect water shortages) or for longer periods (which may challenge water supplies). Should a drought last for a long period of time, water shortage becomes a larger issue. Surface water is the dominant source due to the number of rivers in the region, but ground water supplements agriculture, which consumes the majority of water in the surrounding County. The City receives water from three suppliers, Sacramento Suburban Water District, Citrus Heights Water District and California Water. The supply comes from American River Water Shed (Folsom Lake) supplemented by groundwater well supplies.

Past Occurrences

Disaster Declaration History

There have been 3 state and 1 federal disaster declarations for Sacramento County. This can be seen in Table A-23. Additionally, there have been 26 USDA Secretarial Disaster Declarations from drought in the County, as shown in Past Occurrences in Section 4.3.9 of the Base Plan. These events also likely affected the City to some degree.

Table A-18 Sacramento County –State and Federal Drought Disaster Declarations 1950-2025

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Drought	4	2008, 2014, 2015	1	1977

Source: Cal OES, FEMA

NCDC Events

There have been 83 NCDC drought events in Sacramento County since 1993. These most likely had some impact on the City.

City of Citrus Heights Events

Based on historical information, the occurrence of drought in California, including the City of Citrus Heights, is cyclical, driven by weather patterns. Section 4.3.9 of the Base Plan notes that five droughts have occurred in the past 86 years, which impacted the City and Sacramento County Planning Area.

The City Planning Team noted that the City has experienced multiple, consecutive years of drought. There have been no devastating impacts from drought associated Climate Change since 2021 LHMP. Drought associated with climate change is insidious (slow and ongoing), continues to impact the City and is expected to worsen with time.

Climate Change and Drought and Water Shortage

It is likely that climate change will increase the chance of future occurrence as well as future impacts associated with drought and water shortage. More information on future impacts to the City can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

Climate scientists studying California find that drought conditions are likely to become more frequent and persistent over the 21st century due to climate change. The experiences of California during recent years underscore the need to examine more closely the state's water storage, distribution, management, conservation, and use policies. The 2024 Climate Adaptation Study (CAS) stresses the need for public policy development addressing long term climate change impacts on water supplies. The CAS notes that climate change is likely to significantly diminish California's future water supply, stating that: California must change its water management and uses because climate change will likely create greater competition for limited water supplies needed by the environment, agriculture, and cities.

Cal Adapt scenarios for modeled future drought scenarios were shown in Section 4.3.9 of the Base Plan.

The 2024 Sacramento County CAP noted that California, including Sacramento County, has a highly variable climate that is susceptible to prolonged periods of drought, and recent research suggests that extended drought occurrences (or "mega-droughts") could become more pervasive in future decades, which may result in major impacts on local water supplies and other secondary impacts. The County is not located in an area where snow accumulates, however, major water districts and utilities in the County receive and depend on a substantial amount of water from watersheds that rely upon spring and early-summer snowmelt in the Sierra Nevada mountain range. The Sierra Nevada snowpack, which serves as a natural water supply reservoir for California during the dry months, is predicted to decline in area covered and water volume stored as temperatures rise and precipitation falls more frequently as rain instead of snow at mountain elevations. Further, increased temperatures will affect the timing of historical snowmelt such that the snowpack will typically melt earlier in the year, causing more rapid early spring flows in the Sacramento, American, Cosumnes, and Mokelumne Rivers and reduced late spring and summer flows. Approximately 50 percent of the County is served by groundwater supplies. Changes in surface water flow will have a

direct impact on groundwater recharge, including decreased periods of recharge when late spring and summer stream flows diminish. Further, groundwater usage is higher in periods of drought, therefore, groundwater supplies may be reduced during and after periods of limited surface water flows.

The 2026 American, Bear, and Cosumnes Watersheds Resilience Plan noted that a key driver of climate vulnerability, adaptive capacity, and implementation readiness in the watershed group is drought. An equity analysis was performed as part of this Plan. An Equity Analysis Technical Appendix demonstrates how social vulnerability aligns with the physical hazard environment across the watershed. It noted that drought vulnerability intensifies in the upper watersheds, where cumulative annual flow deficits are projected to increase by up to 25%, contributing to downstream water-supply and affordability pressures that disproportionately affect low-income households.

Vulnerability to Drought and Water Shortage

Based on historical information, the occurrence of drought and water shortage in California, including the City, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts can be extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. The vulnerability of the City of Citrus Heights to drought may vary and include reduction in water supply, turf losses, impacts to natural resources, and an increase in dry fuels and tree dieback.

The whole of the City is at some measure of vulnerability to drought and water shortage. An assessment of a community's vulnerability to drought and water shortage begins with an understanding of local exposure to drought. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The primary concerns regarding drought are water supply, water quality, and tree/landscaping health. The water supply for the region has been impacted requiring mandated water conservation. At this time, the water conservation regulations have not directly impacted household water supply (cooking, bathing, etc.) but have required reduction in irrigation practices for the community such as designated watering days and times.

Drought and State-mandated water conservation regulations have negatively affected the City and private trees, natural areas, and landscaped areas. The health of trees which provide natural shading/cooling is compromised. In addition to loss of natural recreation areas and habitat (impacting quality of life) are also potentially compromised drought and water conservation regulations. Lack of sufficient water may also lead to increase insect activity and diseases that has impacted other regional jurisdictions.

The City has also seen some tree mortality to date. The City developed a mitigation strategy for tree health by prioritizing tree irrigation over landscape irrigation. Some City turf/landscape areas were temporarily damaged/removed as a result.

The City receives water from three suppliers, Sacramento Suburban Water District, Citrus Heights Water District and California Water. The supply comes from American River Water Shed (Folsom Lake) supplemented by groundwater well supplies. The City General Plan addresses applicable hydrology and water quality goals to maintain adequate supply and quality. There are no notable concerns regarding the reliability of these sources.

Assets at Risk

Assets at risk from drought and water shortage include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

The people and populations of the City are not directly affected by drought; although, their turfed areas, trees, and other water dependent resources can all be affected. In extreme drought conditions, however, residents and other populations within the City may be vulnerable to drought and water shortage issues. Water quality can be impacted causing health problems, especially to vulnerable populations. Drought and water shortage can lead to an increase in wildfires threatening City residents. Water shortages can have an effect on all of the population in the City, but often have a greater effect on the unhoused and other vulnerable populations that may be unable to access clean drinking water during shortages. During periods of drought, as the costs of water usage may increase, especially during mandated conservation times, those who are economically disadvantaged may be unable to afford the increased costs of potable water.

Structures

Structures have a limited vulnerability to drought and water shortage. It is the secondary hazard of drought (wildfire) which causes risks to structures. Drought can also stress trees, causing die off. These trees may fall on structures adjacent to them.

Critical Facilities and Infrastructure

Most critical facilities and infrastructure have a limited vulnerability to drought and water shortage. Should drought conditions be severe enough to cause water shortage reliability issues, some facilities and infrastructure may be affected. Water and wastewater systems may be impacted during times of reduced water supply and need to employ contingencies to remain functional and fully operational. Other water-dependent systems may also be adversely affected. Further, the secondary hazard of drought (increased potential for spread of urban fires and wildfire) can pose a significant risk to critical facilities and infrastructure. Sufficient water supply for firefighting can also be an issue. Drought can also stress trees, causing die off. These trees may fall on critical infrastructure adjacent to them and impact power lines and other utilities.

Natural, Historic, and Cultural Resources

Drought and water shortage can have a significant impact on natural resources. Water levels in reservoirs and lakes may be reduced and a loss of wetlands and coastal marsh areas may occur. Severe drought conditions can contribute to an increase in erosion of soils and lead to poor soil and water quality. Further, all of the trees in the City are at risk to drought impacts and a reduction in water supply. These trees provide a wealth of social and environmental benefits to City residents and visitors, from shade and beauty to air quality, carbon reduction and stormwater management. Drought can devastate crops and dry out pastures, dry out forests and critical habitat areas, and reduce food and water available for wildlife and livestock, the latter detailed above as a specific concern to the City. Additionally, drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. It is unlikely that drought and water shortage would have a significant impact on historic and cultural resources in the City.

Impacts from Drought and Water Shortage

The vulnerability of the City to drought is City-wide, but impacts may vary and include reduction in water supply and an increase in dry fuels. The potential for a reduction in water supply during drought conditions generally leads to both mandated and voluntary conservation measures during extended droughts. During these times, the costs of water can also increase. Also of concern, the increased dry fuels, fuel loads, and tree mortality events associated with drought conditions can result in an increased fire danger. In areas of extremely dry fuels, the intensity and speed of fires can be significant. Water supply and flows for fire suppression can also be an issue during extended droughts. Drought can also lead to turf losses and cause tree die off within the City.

Other qualitative impacts associated with drought in the City are those related to water intensive activities such as municipal usage, commerce, tourism, and recreation use. With more precipitation likely falling as rain instead of snow in the Sierra's, and warmer temperatures causing decreased snowfall to melt faster and earlier, water supply is likely to become more unreliable. In addition, drought and water shortage is predicted to become more common. This means less water available for use over the long run, and additional challenges for water supply reliability, especially during periods of extended drought.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City of Citrus Heights include the following:

- Climate change is likely to exacerbate future drought conditions and associated impacts and vulnerability of the City to drought and water shortage. This was discussed in greater detail in the Climate Change and Drought and Water Shortage section of the Hazard Profile above.
- Future population growth should be considered as having more or less people in a community affects the overall hazard vulnerability to the City. Water shortages in the future may be worsened by drought. The City is expected to see slow and steady growth, and any future population growth (like that shown in the 36 future development areas) in the City will add additional pressure to water companies during periods of drought and water shortage, as will additional development in the City. Water companies will need to continue to plan for and add infrastructure capacity for population growth. As the population grows, the nature and makeup of populations will shift and change along with it. Vulnerable and underserved populations, such as those with low incomes and the unhoused that might not always have access to clean water, will need to be considered as future development continues, since they may experience a disproportionate impact from drought and water shortage. Potential population growth will be a challenge not only with regard to the City's water access, but statewide with regard to agricultural and food production. Should the City see a growth in population, overtime, it will likely increase the vulnerability and impacts to the City from this hazard.
- Land use planning should be proactive to address future hazard conditions. More development will require an increase in water supply and associated infrastructure. With the amount of growth planning in the City, changes in land use and development will likely increase the impacts and associated vulnerabilities of the City to this hazard, depending on where and how this future growth occurs.

Future Development

As the population in the City continues to grow, so will the demand for water. Ongoing planning will be needed by the City and local water companies to account for population growth and increased water demands.

Earthquake (w/Subhazards)

Likelihood of Future Occurrence—Unlikely (major)

Vulnerability—Low

Note: though a low significance hazard in the City, due to its importance in the State of California and its ability to trigger secondary hazard events, such as dam or levee failure, this hazard is only profiled here. No vulnerability assessment is conducted. Further, it is not considered a City priority for mitigation planning purposes.

Hazard Profile

An earthquake is caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up, and the rocks slip suddenly, releasing energy in waves that travel through

the earth's crust and cause the shaking that is felt during an earthquake. Earthquakes cause ground shaking, possible liquefaction (discussed below), landslide, settlement, and can cause fires that follow the earthquake. Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, wastewater, power, gas, communication, and transportation. Earthquakes may also cause collateral emergencies including dam and levee failures, seiches, hazmat incidents, fires, avalanches, and landslides. The degree of damage depends on many interrelated factors. Among these are: the magnitude, focal depth, distance from the causative fault, source mechanism, duration of shaking, high rock accelerations, type of surface deposits or bedrock, degree of consolidation of surface deposits, presence of high groundwater, topography, and the design, type, and quality of building construction.

Liquefaction Potential

Liquefaction can be defined as the loss of soil strength or stiffness due to a buildup of pore-water pressure during a seismic event and is associated primarily with relatively loose, saturated fine- to medium-grained unconsolidated soils. Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. If this layer is at the surface, its effect is much like that of quicksand for any structure located on it. If the liquefied layer is in the subsurface, the material above it may slide laterally depending on the confinement of the unstable mass. Liquefaction is caused by a sudden temporary increase in pore-water pressure due to seismic densification or other displacement of submerged granular soils. Liquefiable soil conditions are not uncommon in alluvial deposits in moderate to large canyons and could also be present in other areas of alluvial soils where the groundwater level is shallow (i.e., 50 feet below the surface). Bedrock units, due to their dense nature, are unlikely to present a liquefaction hazard.

Location and Extent

Since earthquakes are regional events, the whole of the City is at risk to earthquake. Citrus Heights and the surrounding area have limited significant seismic and geologic hazards. Geological literature indicates that no major active faults transect the County; however, there are several subsurface faults in the Delta. The City of Citrus Heights General Plan Background Report noted that although no active faults are located in the immediate vicinity of Citrus Heights, several large, active and potentially active faults are located within the surrounding region. These faults include the Dunnigan Hills Fault and other unnamed faults on the west side of the Sacramento Valley, and faults associated with the Foothills Fault System along the western slope of the Sierra Nevada. However, the probability that these faults would significantly affect Citrus Heights is considered to be small. Ground shaking felt in Citrus Heights is more likely to be the result of seismic activity along these or other active or potentially active faults.

The closest known active fault mapped by the California Division of Mines and Geology is the Foothills Fault Zone which is located approximately 15 miles northeast of Citrus Heights. Other active or potentially active faults that may be a hazard to the area include Green Valley-Concord, Hayward, San Andreas, and Calaveras.

Three local faults lie within approximately 20 miles of Citrus Heights, all of which are considered inactive (no activity in the Holocene period of the last 10,000 years). These include the Volcano Hill Fault, just east

of Roseville, the Linda Creek Fault (which has uncertain existence and activity status) extending southeasterly along a portion of Linda Creek in the southern portion of Roseville and into Sacramento County, and a third unnamed fault. The unnamed fault is a west-east oriented fault between Rocklin and Folsom Reservoir. Portions of this fault are concealed, and may be connected to the Bear Mountain Fault Zone.

The amount of energy released during an earthquake is usually expressed as a magnitude and is measured directly from the earthquake as recorded on seismographs. An earthquake's magnitude is expressed in whole numbers and decimals (e.g., 6.8). Seismologists have developed several magnitude scales, as discussed in Section 4.3.11 of the Base Plan.

Another measure of earthquake severity is intensity. Intensity is an expression of the amount of shaking at any given location on the ground surface. Seismic shaking is typically the greatest cause of losses to structures during earthquakes. The City is located in an area where earthquakes of some magnitude occur, so both magnitude and intensity of earthquakes are expected to remain low to moderate. Seismic shaking maps for the area in Section 4.3.10 of the Base Plan show Sacramento County and the City fall within a low to moderate shake risk.

Though the City falls into low to moderate earthquake shake areas, it does not consider earthquake a priority hazard for mitigation planning purposes. This includes subhazards associated with the earthquake hazard, including liquefaction and others as discussed in the Base Plan. With respect to liquefaction, in Sacramento County, liquefaction zones were mapped by CGS for the first time in 2025. Based on the new 2025 liquefaction mapping, only the unincorporated County and City of Sacramento have areas falling within a liquefaction zone. No mapped liquefaction zones are found in the City of Citrus Heights.

Significance and priority of a hazard was determined based on frequency, extent, and resulting damage, including deaths/injuries and property, natural and cultural resources, and economic damage. The ability of a jurisdiction to reduce losses through implementation of existing and new mitigation measures was also considered as to the significance and priority of a hazard. This assessment was used by the City to prioritize those hazards of greatest significance, enabling the City to focus resources where they are most needed. As such, no additional analysis is presented for this hazard, due to its low significance in the City. Further, as a non-priority hazard, it will not be carried forward into the mitigation strategy for the City.

Flood: 1%/0.5%/0.2% Annual Chance

Likelihood of Future Occurrence—Occasional (1%)/Unlikely (0.5/0.2%)

Vulnerability—Medium

Hazard Profile

This hazard discusses the FEMA DFIRM 1%, 0.5%, and 0.2% annual chance floods. These tend to be the larger floods that can occur in the City and have caused damage in the past. Flooding can be a significant problem in the City. Historically, the City has been at risk to flooding primarily during the winter and spring months when river systems in the City swell with heavy rainfall and snowmelt runoff. The City has also been at risk during atmospheric river flood events. Rain on snow events occurring in upper elevations during the spring months can also be significant and contribute to greater downstream runoff and flooding

during large storm events. Normally, storm floodwaters are kept within defined limits by a variety of storm drainage and flood control measures located throughout the Sacramento County Planning Area and the City of Citrus Heights. Occasionally, extended heavy rains result in floodwaters that exceed normal high-water boundaries and cause damage. Flooding has occurred both within the 1% and 0.2% annual chance floodplains and in other localized areas in the City.

Location and Extent

The City of Citrus Heights has areas located in the 1% and 0.2% annual chance flood zones. This is seen in Figure A-18.

Figure A-15 City of Citrus Heights – FEMA DFIRM Flood Zones

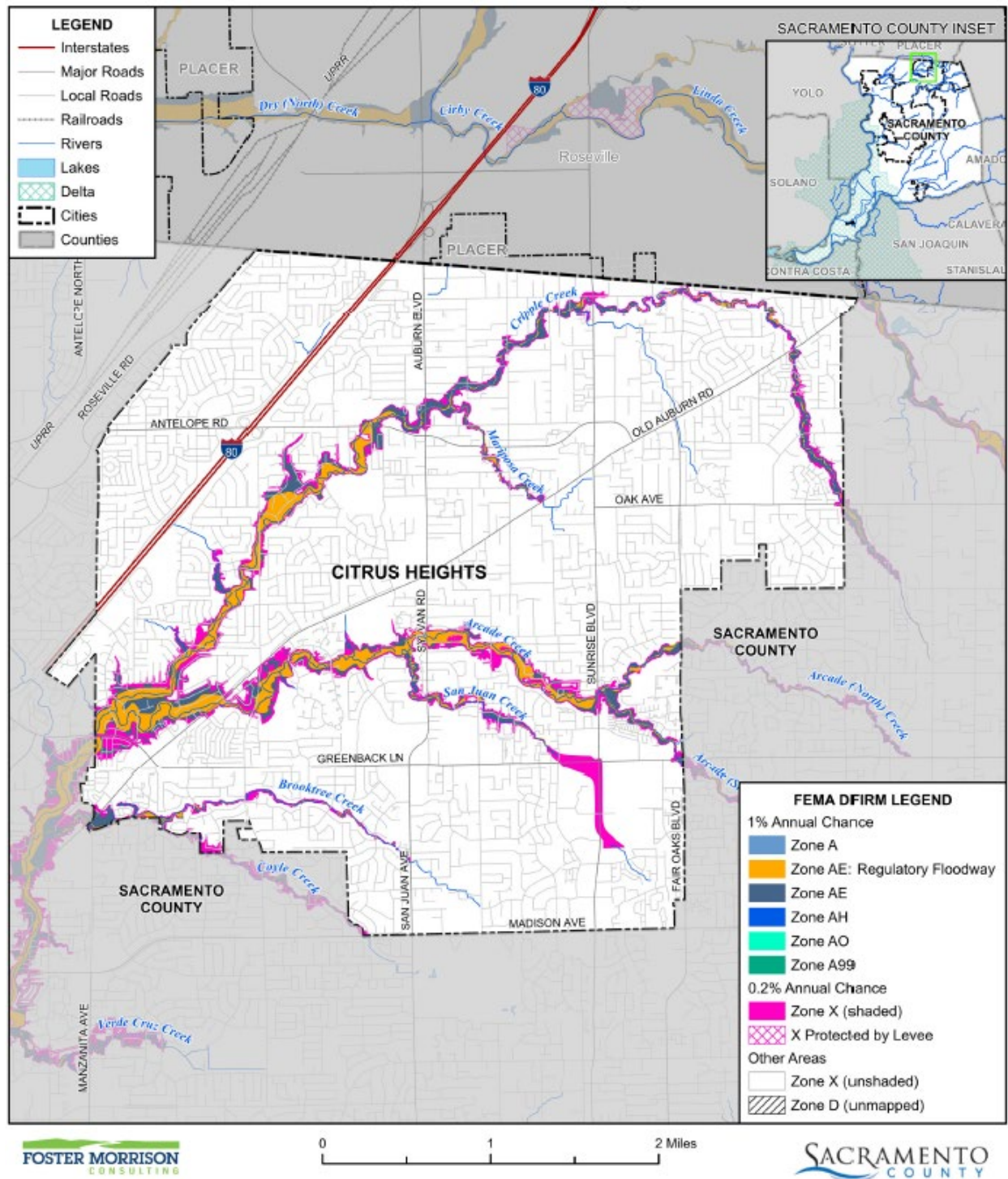


Table A-24 details the DFIRM mapped flood zones located within the City.

Table A-19 City of Citrus Heights– DFIRM Flood Hazard Zones

Flood Zone	Description	Present in City of Citrus Heights
A	1% annual chance flooding; No base flood elevations provided	
AE Regulatory Floodway	1% annual chance flood: Regulatory floodway; Base flood elevations provided	X
AE	1% annual chance flooding; Base flood elevations provided	X
AH	1% annual chance flood areas of shallow flooding between one to three feet deep. Regulatory floodway; Base flood elevations provided	
AO	Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone.	
A99	Areas subject to inundation by the 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction Federal flood protection system.. No Base Flood Elevations (BFEs) or depths are shown.	
X (shaded)	0.2% annual chance flooding: The areas between the limits of the 1% annual chance flood and the 0.2-percent-annual-chance (or 500-year) flood	X
X Protected by Levee	Areas protected by levees from 1% annual chance flood event. Levee protection places these areas in the 0.2% annual chance flood zone. Flood insurance is not mandatory but is available.	
X (unshaded)	Areas of minimal flood hazard	X
D	Unmapped areas	

Source: FEMA DFIRM 02/22/2024

Additionally, flood extents can generally be measured in volume, velocity, and depths of flooding. Expected flood depths in the City vary, depending on the nature and extent of a flood event; specific depths are unknown. Flood durations in the City tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Flooding in the City tends to have a shorter speed of onset, due to the amount of water that flows through the City.

Geographical flood extents for the City from the FEMA DFIRMs are shown in Table A-25.

Table A-20 City of Citrus Heights – Geographical DFIRM Flood Zone Extents

Flood Zone	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
1% Annual Chance Flood Hazard	514	7%	300	5%	214	18%
0.2% Annual Chance Flood Hazard	151	2%	120	2%	31	3%
Other Areas	6,982	91%	6,046	94%	935	79%

Flood Zone	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Total	7,647	100%	6,466	100%	1,180	100%

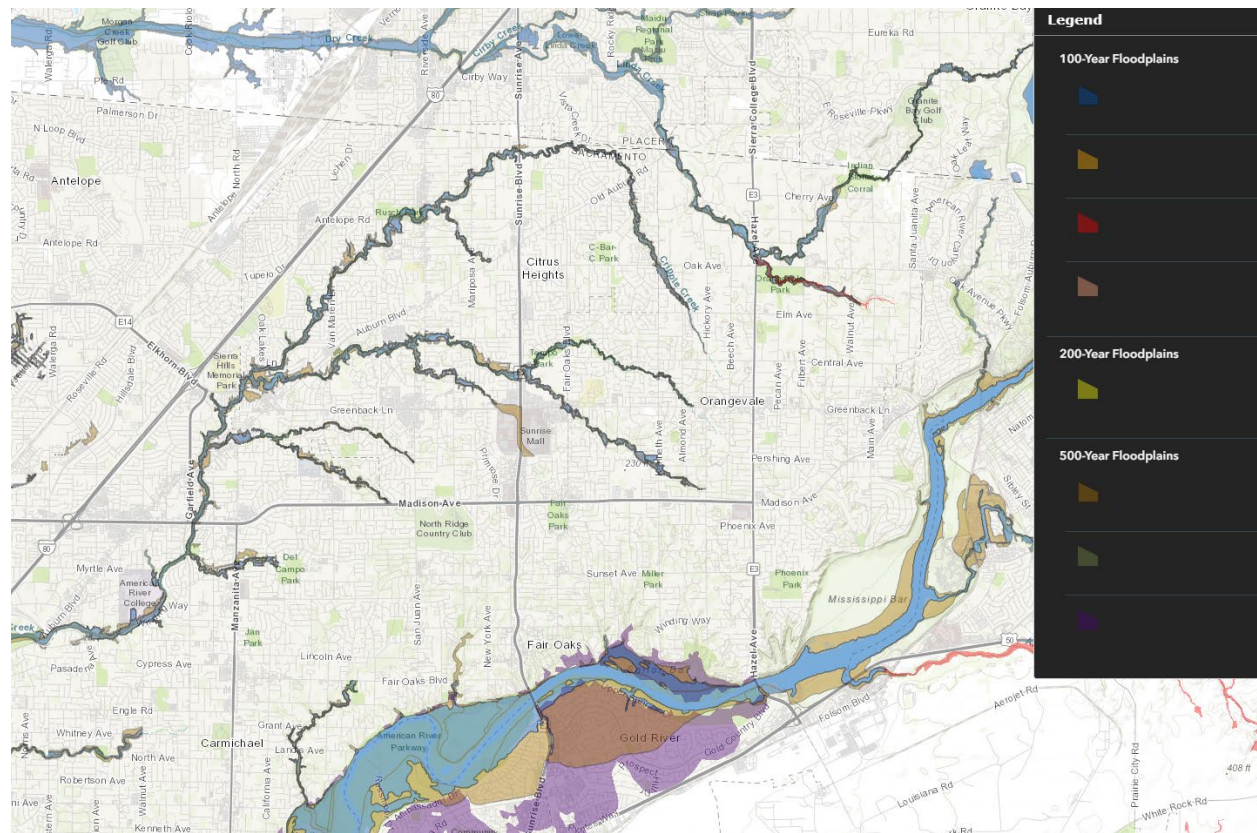
Source: FEMA DFIRM 02/22/2024

California Department of Water Resources Best Available Maps (BAM)

The FEMA regulatory maps provide just one perspective on flood risks in the City. Senate Bill 5 (SB 5), enacted in 2007, authorized the California DWR to develop the Best Available Maps (BAM) displaying 100- and 200-year floodplains for areas located within the Nevada-San Joaquin (SAC-SJ) Valley watershed. This effort was completed by DWR in 2008. DWR has expanded the BAM to cover all counties in the State and to include 500-year floodplains.

Different than the FEMA DFIRMs which have been prepared to support the NFIP and reflect only the 100-year event risk, the BAMs are provided for informational purposes and are intended to reflect current 100-, 200-(as applicable), and 500-year event risks using the best available data. The 100-year floodplain limits on the BAM are a composite of multiple 100-year floodplain mapping sources. It is intended to show all currently identified areas at risk for a 100-year flood event, including FEMA's 100-year floodplains. The BAM are comprised of different engineering studies performed by FEMA, Corps, and DWR for assessment of potential 100-, 200-, and 500-year floodplain areas. These studies are used for different planning and/or regulatory applications, and for each flood frequency may use varied analytical and quality control criteria depending on the study type requirements. The value in the BAMs is that they provide a bigger picture view of potential flood risk to the City than that provided in the FEMA DFIRMs. The BAM map for the City is shown in Figure A-19.

Figure A-16 City of Citrus Heights – Best Available Map



Source: California DWR. Retrieved 12/1/2025.

Legend explanation: **Blue** - FEMA 100-Year, **Orange** – Local 100-Year (developed from local agencies), **Red** – DWR 100-year (Awareness floodplains identify the 100-year flood hazard areas using approximate assessment procedures.), **Pink** – USACE 100-Year (2002 Sac and San Joaquin River Basins Comp Study), **Yellow** – USACE 200-Year (2002 Sac and San Joaquin River Basins Comp Study), **Tan** – FEMA 500-Year, Grey – Local 500-Year (developed from local agencies), **Purple** – USACE 500-Year (2002 Sac and San Joaquin River Basins Comp Study).

Past Occurrences

Disaster Declaration History

A list of state and federal disaster declarations for Sacramento County from flooding is shown on Table A-26. These events also likely affected the City to some degree.

Table A-21 Sacramento County – State and Federal Disaster Declarations from Flood 1950-2025

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Flood (including heavy rains and storms)	26	1950, 1955, 1958 (twice), 1963, 1969, 1982 (twice), 1983, 1986, 1995 (twice), 1996, 1997, 1998, 2008, 2017 (three times), 2022*, 2023 (three), 2024 (twice)	18	1955, 1958, 1964, 1969, 1983, 1986, 1995 (twice), 1997, 1998, 2006, 2017 (three times), 2023 (three times)*, 2024*

Source: Cal OES, FEMA

*included a landslide component.

NCDC Events

The NCDC tracks flooding events for the County. Events have been tracked for flooding since 1993. Sacramento County has seen 174 events. These events most likely had some impact on the City.

City of Citrus Heights Events

These sections first show historic hazard events occurring since the 2021 LHMPs and then those occurring prior to the 2021 LHMP.

Events since 2021 LHMP

While the state and region have experienced flooding events in the past 5 years, judicious creek maintenance in the City has protected the community from significant occurrences of flooding in recent years. There have been occurrences of minor localized flooding of roadways, but no impacts beyond normal operations. These are discussed in more detail in the Past Occurrences section of the Flood: Localized Stormwater Flooding section below.

Events prior to 2021

Prior to 2021, the City implemented two key projects to limit damages from future flood events. These projects were designed to protect and restore the creek that had become a potential hazard to public health and welfare:

- Brooktree Creek Rehabilitation at Paroaks Project
 - ✓ In 2016, the City released an emergency creek bank restoration project. Brooktree Creek had eroded the bank next to 6017 Paroaks Drive. Approximately 100' of Geoweb retaining wall installed along with 130' of rock stabilized channel and check dams.
- Mariposa Avenue Slope Repair Project
 - ✓ In 2016, the City had a contractor construct 50' of concrete poured in drilled hole retaining wall and 100' of guardrail along Cripple Creek. The erosion had threatened the roadway.

Those are the 2 erosion control projects implemented in previous years. These projects include:

- Matheny Drainage Project
 - ✓ In 2003, the City released an emergency creek bank restoration project. Arcade Creek had eroded the bank next to Matheny Way and caused the street to crack open. Approximately 250' of gabion baskets were installed along the creek bank just outside the shoulder of the road.
- Stock Ranch Drainage Project
 - ✓ In 2011, the City had a contractor rock the banks along Arcade Creek at a major pedestrian bridge and restore an outfall for a sedimentation basin next to the bridge. Over 30' of bank had been eroded over a 5-year time span. The erosion had threatened the bridge piers and partially collapsed a concrete outfall.

Climate Change and Flood

It is likely that climate change will increase the chance of future occurrence as well as future impacts associated with flood. More information on future impacts to the City can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

According to the 2024 CAS, climate change may affect flooding in California, the Sacramento County Planning Area, and the City of Citrus Heights. While average annual rainfall may increase or decrease slightly, the intensity of individual rainfall events is likely to increase during the 21st century. It is possible that average soil moisture and runoff could decline, however, due to increasing temperature, evapotranspiration rates, and spacing between rainfall events. Reduced snowpack and increased number of intense rainfall events are likely to put additional pressure on water infrastructure which could increase the chance of flooding associated with breaches or failures of flood control structures such as levees and dams. Cal Adapt future precipitation projections were shown in Section 4.3.4.

The 2024 Sacramento County CAP noted that climate change is likely to lead to changes in the frequency, intensity, and duration of extreme weather events, such as sustained periods of heavy precipitation, increased rainfall intensity during precipitation events, and increased risk of rain-on-snow events. Further, more winter-time precipitation that falls as rain instead of snow, and higher temperatures that will cause earlier snowmelt, which could produce substantial surface water flows over a short period of time and may potentially affect dams and spillways and overwhelm levee systems designed for historical precipitation patterns. Historically, the County experienced an average of four extreme precipitation events per year (as shown in Section 4.3.4 of the Base Plan). Under the medium and high emissions scenarios, the County is expected to experience five to six extreme precipitation events per year by mid-century and six to seven extreme precipitation events per year by the late century.

The 2026 American, Bear, and Cosumnes Watersheds Resilience Plan noted that a key driver of climate vulnerability, adaptive capacity, and implementation readiness in the watershed group is flooding. An equity analysis was performed as part of this Plan. An Equity Analysis Technical Appendix demonstrates how social vulnerability aligns with the physical hazard environment across the watershed. It noted that flooding impacts are most severe downstream, where rising flows increasingly stress Sacramento's levee system; a modeled levee-breach scenario affects 12.5% of the watershed population, and 59% of those affected fall into the highest flood-sensitivity category.

Future flooding exacerbated by climate change will result in a range of potential impacts across the County and the City. For populations, there is an array of social vulnerability factors that exacerbate flood-related risks, and those residing in floodplains are especially vulnerable to the direct impacts of flooding. Floodwaters can interact with sources of pollution and distribute hazardous pollutants locally and regionally, which may result in water contamination and a range of human health impacts. Additionally, flooding can disrupt transportation networks, cause economic losses through business and government facility closures, disrupt communications, disrupt the provision of utilities, and cause significant damage to buildings and critical infrastructure. Further, flooding may also threaten ecosystems and agricultural resources; unlike natural flooding regimes that deposit useful sediment resulting in increased soil fertility as well as groundwater recharge, catastrophic flooding from levee overtopping could lead to soil erosion

and loss of viable cropland. It could also release sewage and hazardous materials into the environment if wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed.

Vulnerability to Flood: 1%, 0.5%, and 0.2% Annual Chance

Floods have been a part of the City's historical past and will continue to be so in the future. During winter months, long periods of precipitation and the timing of that precipitation are critical in determining the threat of flood, and these characteristics further dictate the potential for widespread structural and property damage. Predominantly, the effects of 1% and 0.2% annual chance flooding are generally confined to areas near the waterways of the City. As waterways grow in size from local drainages, so grows the threat of flood and dimensions of the threat.

The whole of the City is at some measure of vulnerability to floods. An assessment of a community's vulnerability to flood begins with an understanding of local exposure to flood. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The City has 26 miles of natural creek channels within its 14 square miles. Cripple Creek, Arcade Creek, San Juan Creek, Mariposa Creek, Coyle Creek and Brooktree Creek traverse the City and are at risk to bank erosion. All the natural creek channels within the City suffer from suburban runoff causing deep incisions and erosion.

The City's chief concerns with flood events are localized flooding, private property damage, downed trees impacting traffic and/or creek flooding, damage to infrastructure (roadways, bridges, structures), power outages, damage to environment, habitat and loss of recreation facilities within open spaces and parks such as trails playground equipment and covered picnic areas.

Aging infrastructure and critical roadway crossings that are undersized for today's 100-year and higher flood flows, which is the root cause of creek water levels backing up into neighborhoods and expanding the flood risk. Particularly at:

- Greenback Lane over Arcade Creek (County owned and maintained structure)
- Auburn Blvd over Cripple Creek
- Auburn Blvd over Brooktree Creek (County owned and maintained structure)
- Sylvan Road over San Juan and Arcade Creeks
- Mariposa Avenue over Arcade, Cripple, and San Juan Creeks
- Olivine Avenue over Cripple Creek

These structures were primarily constructed over 60 years ago and were designed for storm water and creek flows of a past era. The City intends to work with partnering jurisdictions and apply for grant funding to study and ultimately improve creek flows under these crossings (Mitigation Action 19 below).

Assets at Risk

Assets at risk from flood include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All people and populations located in the 1% and 0.2% annual chance floodplains are at some risk to flooding. Certain vulnerable populations located within areas prone to flooding may be at increased risk to this hazard, especially during a large event with minimal advance notice. These vulnerable populations include: the unsheltered, those with limited mobility, and those that lack the resources to leave the area.

City residents that live in the 1% and 0.2% annual chance floodplains are often the most vulnerable. Not only are the residents at risk, but their homes and contents are all at risk, compounding the impacts associated with significant hazard events. To further evaluate the impact to the City of Citrus Heights's residential population residing within these hazard areas, the DFIRM flood zones were overlayed on the parcel layer. Those residential parcels that intersect the flood zones were counted and multiplied by the 2023 Census Bureau average household factors for the City of Citrus Heights – 2.56. According to this analysis, there is a total population of 3,612 and 911 residents of the City at risk to flooding in the 1% and 0.2% annual chance floodplains, respectively. This is shown in Table A-27.

Table A-22 City of Citrus Heights – Improved Residential Parcels and Population by Summary FEMA DFIRM Flood Zone

Jurisdiction	1% Annual Chance		0.2% Annual Chance*	
	Improved Residential Parcels	Population at Risk	Improved Residential Parcels	Population at Risk
Citrus Heights	1,411	3,612	356	911

Source: FEMA DFIRM 02/2024, 2025 Sacramento County Parcel/Assessor Data, 2020 US Census Bureau Average Household Size – City of Citrus Heights (2.56)

*This parcel count only includes those parcels in the 0.2% annual chance flood zone, exclusive of the 1% annual chance flood zone. The 0.2% annual chance flood, in actuality, also includes all parcels in the 1% annual chance flood zone.

The City noted that the Critical Facilities and Infrastructure section below includes the facilities used by At-Risk populations that are threatened by this hazard. While this is not specific to what special populations reside in the City, it does speak to facilities that area used to serve (portions) of this population.

Structures

Large flood events can affect the built environment of the City. Certain structures in the City are at risk of DFIRM flooding and primarily include those structures located within the 1% and 0.2% annual chance floodplains. The vulnerability of structures depends on flood depths and can range from slight damage to totally inundated in extreme events.

GIS was used to determine the possible impacts of flooding on parcels and structures within the City of Citrus Heights. The methodology described in Section 4.3.11 of the Base Plan was followed in determining structures and values at risk to the 1% and 0.2% annual chance flood event. Table A-28 is a summary table

for the City of Citrus Heights. Parcel counts, land and improved values (i.e., those with a structure improvement on the parcel), estimated content replacement values, and total values in the City are shown for the 1% and 0.2% annual chance flood zones, as well as for those properties that fall within other areas of the FEMA DFIRM flood zones. Table A-29 breaks down Table A-28 and shows the same analysis further broken out by detailed FEMA flood zone and property use.

Table A-23 City of Citrus Heights – Count and Value of Parcels and Structures in Summary DFIRM Flood Zones

Flood Zone	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
1% Annual Chance Flood Hazard	1,676	1,456	\$247,870,386	\$623,877,999	\$345,298,328	\$1,217,046,713
0.2% Annual Chance Flood Hazard	422	390	\$109,292,609	\$216,553,960	\$164,376,328	\$490,222,897
Other Areas	23,851	23,039	\$2,831,634,977	\$9,769,564,809	\$5,253,362,997	\$17,854,562,783
Citrus Heights Total	25,949	24,885	\$3,188,797,972	\$10,609,996,768	\$5,763,037,652	\$19,561,832,392

Source: FEMA DFIRM 02/2024, 2025 Sacramento County Parcel/Assessor Data

*With respect to improve parcels within the floodplain, the actual structures on the parcels may not be located within the actual floodplain, may be elevated and or otherwise outside of the identified flood zone

**This parcel count only includes those parcels in the 0.2% annual chance flood zone, exclusive of the 1% annual chance flood zone. The 0.2% annual chance flood, in actuality, also includes all parcels in the 1% annual chance flood zone.

Table A-24 City of Citrus Heights – Count and Values of Parcels and Structures by Detailed DFIRM Flood Zone and Property Use

Flood Zone / Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
1% Annual Chance Flood Hazard						
Zone AE						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	0	0	\$0	\$0	\$0	\$0
Church / Welfare	1	1	\$53,896	\$1,835,364	\$1,835,364	\$3,724,624
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	31	0	\$42,440	\$0	\$0	\$42,440
Office	7	7	\$3,231,112	\$4,887,684	\$4,887,684	\$13,006,480
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	1	1	\$522,798	\$726,994	\$726,994	\$1,976,786
Residential	656	640	\$55,171,628	\$155,422,796	\$77,711,398	\$288,305,822

Flood Zone / Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
Retail / Commercial	12	12	\$9,214,100	\$15,701,441	\$15,701,441	\$40,616,982
Unknown	3	0	\$0	\$0	\$0	\$0
Vacant	29	1	\$680,978	\$5,800	\$0	\$686,778
Zone AE Total	740	662	\$68,916,952	\$178,580,079	\$100,862,881	\$348,359,912
Zone AE: Regulatory Floodway						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	1	1	\$434,307	\$2,583,583	\$2,583,583	\$5,601,473
Church / Welfare	7	5	\$1,250,397	\$9,207,276	\$9,207,276	\$19,664,949
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	77	1	\$310,867	\$790,704	\$790,704	\$1,892,275
Office	9	8	\$4,271,195	\$20,112,185	\$20,112,185	\$44,495,565
Public / Utilities	2	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	810	771	\$163,922,587	\$401,382,462	\$200,691,231	\$765,996,280
Retail / Commercial	7	7	\$6,688,271	\$11,050,468	\$11,050,468	\$28,789,207
Unknown	4	0	\$0	\$0	\$0	\$0
Vacant	19	1	\$2,075,810	\$171,242	\$0	\$2,247,052
Zone AE: Regulatory Floodway Total	936	794	\$178,953,434	\$445,297,920	\$244,435,447	\$868,686,801
1% Annual Chance Flood Hazard Total	1,676	1,456	\$247,870,386	\$623,877,999	\$345,298,328	\$1,217,046,713
0.2% Annual Chance Flood Hazard						
Zone X (shaded)						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	1	0	\$10	\$0	\$0	\$10
Church / Welfare	0	0	\$0	\$0	\$0	\$0
Industrial	0	0	\$0	\$0	\$0	\$0
Miscellaneous	10	0	\$140	\$0	\$0	\$140
Office	10	10	\$3,777,765	\$11,376,689	\$11,376,689	\$26,531,143

Flood Zone / Property Use	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
Public / Utilities	0	0	\$0	\$0	\$0	\$0
Recreational	0	0	\$0	\$0	\$0	\$0
Residential	361	356	\$37,055,544	\$104,355,265	\$52,177,633	\$193,588,442
Retail / Commercial	26	24	\$68,212,996	\$100,822,006	\$100,822,006	\$269,857,008
Unknown	1	0	\$0	\$0	\$0	\$0
Vacant	13	0	\$246,154	\$0	\$0	\$246,154
0.2% Annual Chance Flood Hazard Total	422	390	\$109,292,609	\$216,553,960	\$164,376,328	\$490,222,897
Other Areas						
Zone X (unshaded)						
Agricultural	0	0	\$0	\$0	\$0	\$0
Care / Health	33	25	\$13,578,878	\$70,877,078	\$70,877,078	\$155,333,034
Church / Welfare	39	33	\$12,559,580	\$41,498,431	\$41,498,431	\$95,556,442
Industrial	25	19	\$14,692,637	\$31,791,918	\$47,687,877	\$94,172,432
Miscellaneous	290	0	\$612,446	\$0	\$0	\$612,446
Office	123	116	\$48,330,623	\$97,030,247	\$97,030,247	\$242,391,117
Public / Utilities	16	0	\$19	\$0	\$0	\$19
Recreational	5	3	\$2,506,132	\$8,777,806	\$8,777,806	\$20,061,744
Residential	22,658	22,514	\$2,461,928,148	\$9,061,667,345	\$4,530,833,673	\$16,054,429,166
Retail / Commercial	325	310	\$250,046,557	\$456,657,885	\$456,657,885	\$1,163,362,327
Unknown	128	0	\$0	\$0	\$0	\$0
Vacant	209	19	\$27,379,957	\$1,264,099	\$0	\$28,644,056
Other Areas Total	23,851	23,039	\$2,831,634,977	\$9,769,564,809	\$5,253,362,997	\$17,854,562,783
Citrus Heights Total	25,949	24,885	\$3,188,797,972	\$10,609,996,768	\$5,763,037,652	\$19,561,832,392

Source: FEMA DFIRM 02/2024, 2025 Sacramento County Parcel/Assessor Data

*With respect to improve parcels within the floodplain, the actual structures on the parcels may not be located within the actual floodplain, may be elevated and or otherwise outside of the identified flood zone

**This parcel count only includes those parcels in the 0.2% annual chance flood zone, exclusive of the 1% annual chance flood zone. The 0.2% annual chance flood, in actuality, also includes all parcels in the 1% annual chance flood zone.

Table A-30 summarizes Table A-29 and shows City of Citrus Heights loss estimates and improved values at risk by FEMA 1% and 0.2% annual chance flood zones. According to Table A-29 and Table A-30, the City of Citrus Heights has 1,456 parcels and \$969.2 million of structure and contents values or values in the 1% annual chance flood zone, and 390 improved parcels and \$381 million of structure and contents values in the 0.2% annual chance flood zone. These values can be refined a step further. Applying the 20 percent damage factor as previously described in Section 4.3.11 of the Base Plan, there is a 1% chance in any given year of a flood event causing \$35.2 million in damage and a 0.2% chance in any given year of a flood event causing \$137.4 million in damage in the City of Citrus Heights. The loss ratio of 1.2% indicates that flood losses for 1% annual chance flooding would be minor and the City would be able to readily recover. The loss ratio of 0.75% indicates that flood losses for 0.5% annual chance flooding would be relatively minor and the City should also be able to recover relatively quickly.

Table A-25 City of Citrus Heights – Flood Loss Estimates

Flood Zone	Total Parcel Count	Improved Parcel Count	Improved Structure Value	Estimated Contents Value	Total Value	Loss Estimate	Loss Ratio
1% Annual Chance Flood Hazard	1,676	1,456	\$623,877,999	\$345,298,328	\$969,176,327	\$193,835,265	1.2%
0.2% Annual Chance Flood Hazard	422	390	\$216,553,960	\$164,376,328	\$380,930,288	\$76,186,058	0.5%
Citrus Heights Total	2,098	1,946	\$840,431,959	\$509,674,656	\$1,350,106,616	\$270,021,323	1.7%

Source: FEMA DFIRM 02/2024, 2025 Sacramento County Parcel/Assessor Data

*With respect to improve parcels within the floodplain, the actual structures on the parcels may not be located within the actual floodplain, may be elevated and or otherwise outside of the identified flood zone

**This parcel count only includes those parcels in the 0.2% annual chance flood zone, exclusive of the 1% annual chance flood zone. The 0.2% annual chance flood, in actuality, also includes all parcels in the 1% annual chance flood zone.

Insurance Coverage, Claims Paid, and Repetitive Losses

Standard property insurance does not include flood coverage because of the relatively high risk. The National Flood Insurance Program (NFIP) provides flood insurance to residents in those communities that participate in the NFIP. Federal financial assistance requires the purchase of flood insurance for structures located within a 100-year floodplain – a requirement that affects nearly all mortgages financed through commercial lending institutions. Flood insurance is also recommended for all structures protected by levees, even if not mapped within a floodplain.

The City of Citrus Heights joined the National Flood Insurance Program (NFIP) on October 15, 1997. The City recently joined the CRS program. It was granted a Class 7 rating, which reduces flood insurance in the City by 15 percent.

NFIP data, provided by CA DWR using FEMA's (CIS database), indicates that as of February 2, 2026, there were 170 flood insurance policies in force in the City with \$50,779,000 of coverage. 65 of these are in A zones, while 105 are in B, C, or X zones. There have been 20 historical claims for flood losses totaling \$372,881.37. Of these, 11 were in an A zones and 9 were in B, C, or X zones. 18 of the claims were for pre-FIRM structures, while 2 were for post-FIRM structures. There have been 2 substantial damage claims

since 1978. NFIP data further indicates that there are 14 repetitive loss structures in the City, and 0 severe repetitive loss buildings in the City. This can be seen in Table A-31. This RL data provided by FEMA's PIVOT database also includes information on the residential property type.

Table A-26 City of Citrus Heights – Repetitive Loss Structures

Community	Residential Type	Insured	Mitigated	FMA Repetitive Loss	FMA Severe Repetitive Loss	NFIP Repetitive Loss	NFIP Severe Repetitive Loss	# of Losses
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	Yes	No	2
Citrus Heights, City Of (060765)	Single Family	No	No	No	No	Yes	No	2
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	No	No	3
Citrus Heights, City Of (060765)	Single Family	No	No	No	No	Yes	No	4
Citrus Heights, City Of (060765)	2-4 Family	No	No	No	No	Yes	No	3
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	Yes	No	2
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	No	No	4
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	No	No	2
Citrus Heights, City Of (060765)	Single Family	Yes	Yes	No	Yes	No	No	4
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	Yes	No	2
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	No	No	2
Citrus Heights, City Of (060765)	2-4 Family	Yes	No	No	No	Yes	No	2
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	No	Yes	No	2

Community	Residential Type	Insured	Mitigated	FMA Repetitive Loss	FMA Severe Repetitive Loss	NFIP Repetitive Loss	NFIP Severe Repetitive Loss	# of Losses
Citrus Heights, City Of (060765)	Single Family	Yes	No	No	Yes	Yes	No	2
Total								36

Source: FEMA Region IX (PIVOT database)

Based on this analysis of insurance coverage, the City has values at risk to the 1% annual chance and greater floods. Of the 1,456 improved parcels within the 1% annual chance flood zone, 65 (or 4.5%) of those parcels maintain flood insurance. This can be seen on Table A-32.

Table A-27 City of Citrus Heights – Percentage of Policy Holders to Improved Parcels in the 1% Annual Chance Floodplain

Jurisdiction	Improved Parcels in SFHA (1% Annual Chance) Floodplain*	Insurance Policies in the SFHA (1% Annual Chance) Floodplain	Percentage of 1% Annual Chance Floodplain Parcels Currently Insured
Citrus Heights	1,456	65	4.5%

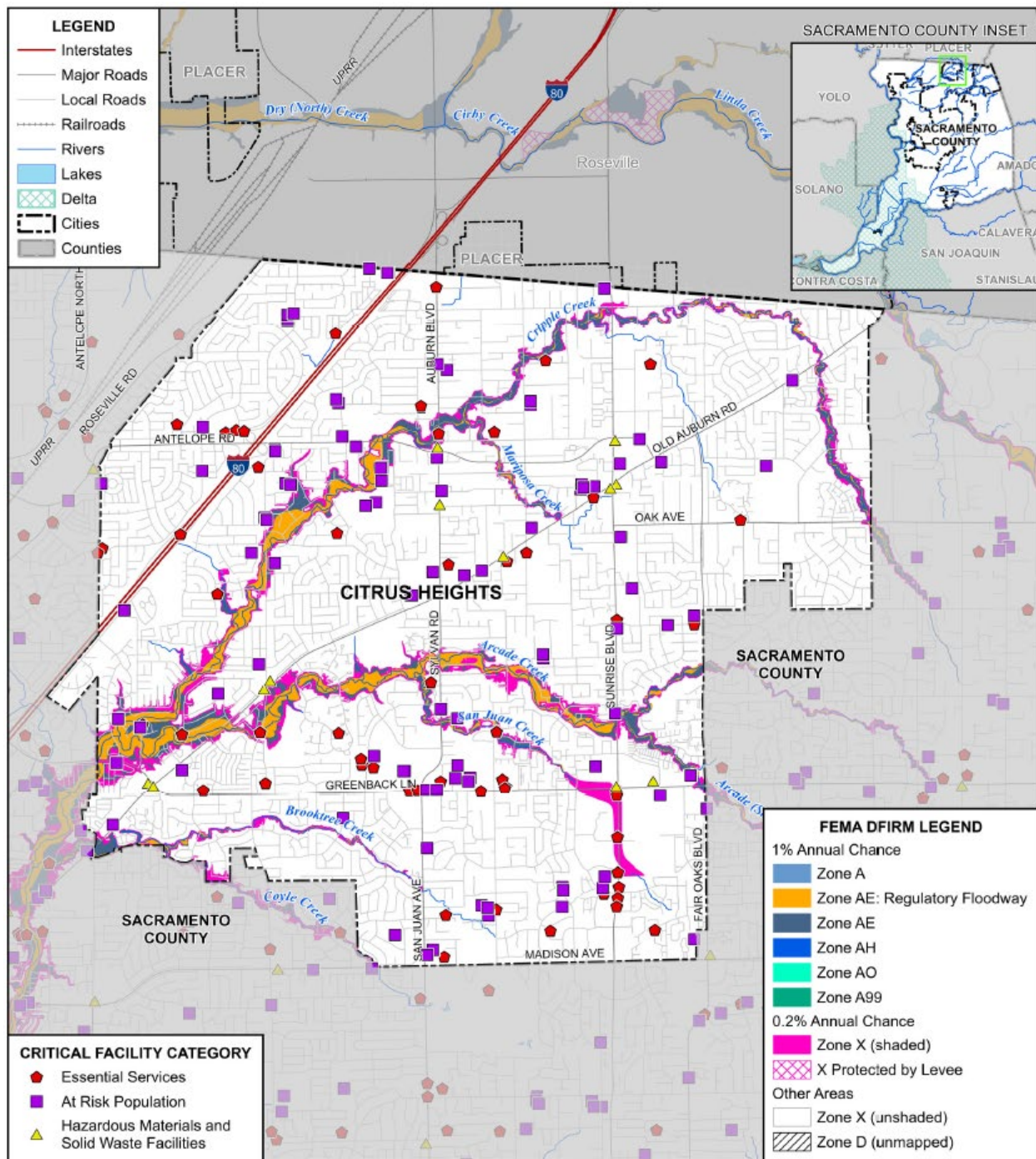
Source: FEMA DFIRM 02/2024, FEMA CIS 2025, 2025 Sacramento County Parcel/Assessor's Data

Critical Facilities and Infrastructure

1% and 0.2% annual chance flooding presents a threat to critical facilities and infrastructure. Damage to any one of these systems can threaten public safety, wreak havoc on daily life, impact properties far from flood zones, and result in economic impacts to the City.

The following analysis was performed on the critical facility inventory in the City to determine which critical facilities fall into each FEMA DFIRM flood zone. Using GIS, the FEMA DFIRM flood zones were overlaid on the critical facility GIS layer. This is shown on Figure A-20 for the FEMA DFIRM flood zones. Table A-43 details which critical facilities fall in which FEMA DFIRM flood zones.

Figure A-17 City of Citrus Heights – Critical Facilities in FEMA DFIRM Flood Zones



FOSTER MORRISON
CONSULTING

0 1 2 Miles

SACRAMENTO
COUNTY

Data Source: FEMA Effective DFIRM 02/22/2024 (NFHL 10/13/2025 database),
Sacramento County, Cal-Atlas; Map Date: 4/17/2026.

Table A-28 City of Citrus Heights – Critical Facilities by Category and Type in FEMA DFIRM Flood Zones

Flood Zone	Critical Facility Category/Critical Facility Type	Facility Count
1% Annual Chance Flood Hazard		
Zone AE: Regulatory Floodway	<i>Essential Services Facilities</i>	
	Water Well	3
	<i>Essential Services Facilities Total</i>	<i>3</i>
	Total	3
Zone AE	<i>Essential Services Facilities</i>	
	Emergency Evacuation Center	1
	Water Well	1
	<i>Essential Services Facilities Total</i>	<i>2</i>
	<i>At Risk Population Facilities</i>	
	Places of Worship	2
	School	1
	<i>At Risk Population Facilities Total</i>	<i>3</i>
	Total	5
1% Annual Chance Flood Hazard Total		8
0.2% Annual Chance Flood Hazard		
Zone X (shaded)	<i>Essential Services Facilities</i>	
	Emergency Evacuation Center	1
	FDIC Insured Banks	2
	<i>Essential Services Facilities Total</i>	<i>3</i>
	<i>At Risk Population Facilities</i>	
	Mobile Home Parks	2
	Places of Worship	1
	<i>At Risk Population Facilities Total</i>	<i>3</i>
	<i>Hazardous Materials and Solid Waste Facilities</i>	
	Leaky Underground Storage Tank	1
	<i>Hazardous Materials and Solid Waste Facilities Total</i>	<i>1</i>
	Total	7
0.2% Annual Chance Flood Hazard Total		7
Other Areas		
Zone X (unshaded)	<i>Essential Services Facilities</i>	
	Emergency Evacuation Center	6
	EMS Stations	4
	FDIC Insured Banks	11

Flood Zone	Critical Facility Category/Critical Facility Type	Facility Count
	Fire Station	5
	Law Enforcement	2
	Microwave Service Towers	17
	Water Well	23
	<i>Essential Services Facilities Total</i>	<i>68</i>
	<i>At Risk Population Facilities</i>	
	Colleges, Universities, and Professional Schools	3
	Day Care Center	27
	Mobile Home Parks	8
	Places of Worship	34
	School	30
	<i>At Risk Population Facilities Total</i>	<i>102</i>
	<i>Hazardous Materials and Solid Waste Facilities</i>	
	Leaky Underground Storage Tank	11
	<i>Hazardous Materials and Solid Waste Facilities Total</i>	<i>11</i>
	Total	181
Other Areas Total		181
Citrus Heights Total		196

Source: FEMA DFIRM 02/2024, City of Citrus Heights

Natural, Historic, and Cultural Resources

Large flood events can affect natural, historic, and cultural resources. There are a number of ways floodwaters can impact natural resources and the environment. Wildlife habitats can be destroyed by floodwaters. Contaminated floodwater can pollute rivers and habitats. Silt and sediment can destroy natural areas. Riverbanks and natural levees can be eliminated as rivers reach bankfull capacity. Rivers can be widened, and deposition can increase downstream. Trees can be uprooted by high-velocity water flow. Plants that survived the initial flood may die due to being inundated with water. Historic and cultural resources may also be affected. Generally, the impacts are associated with damage to structures within the flooded areas, but other cultural resources such as those associated with Native Americans and old tribal areas can also be disturbed, damaged and lost during extreme flood events. Any of these that fall in the flood zones shown on Figure A-18 would be vulnerable.

Impacts from Flood: 1%, 0.5%, and 0.2% Annual Chance

Floods are among the costliest natural disasters in terms of human hardship and economic loss nationwide. Large flood events, including those associated with 1% and 0.2% annual chance floods, can cause substantial damage to structures, landscapes, and utilities as well as life safety issues. People may be swept

away in floodwaters, causing injuries or deaths. Floods can be extremely dangerous, and even six inches of moving water can knock over a person given a strong current. During a flood, people can also suffer heart attacks or electrocution due to electrical equipment short outs. Direct impacts, such as drowning, can be limited with adequate warning and public education about what to do during floods. Floodwaters can transport large objects downstream which can damage or remove stationary structures. Structures can be damaged directly from floodwaters and can also be damaged from trees falling as a result of water-saturated soils. Ground saturation can result in instability, collapse, or other damage. Objects can also be buried or destroyed through sediment deposition. Floodwaters can also break utility lines and interrupt services causing power outages. The interruption of power causes major problems and can result in the closure of governmental offices and community businesses. Public schools may also be required to close or be placed on a delayed start schedule. Roads can be damaged and closed, causing safety and evacuation issues.

Standing water can cause damage to crops, roads, foundations, and electrical circuits. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, loss of environmental resources, and economic impacts.

Impacts that are not quantified, but can be anticipated in large future events, include:

- Injury and loss of life;
- Commercial and residential structural and property damage;
- Disruption of and damage to public infrastructure, utilities, and services;
- Damage to roads/bridges resulting in loss of mobility;
- Significant economic impact (jobs, sales, tax revenue) to the community; and
- Negative impact on commercial and residential property values

Health Hazards from Flooding

Certain health hazards are also common to flood events. While such problems are often not reported, three general types of health hazards accompany floods. The first comes from the water itself. Floodwaters carry anything that was on the ground that the upstream runoff picked up, including dirt, oil, animal waste, and lawn, farm and industrial chemicals. Pastures and areas where cattle and hogs are kept or their wastes are stored can contribute polluted waters to the receiving streams.

Floodwaters also saturate the ground, which leads to infiltration into sanitary sewer lines. When wastewater treatment plants are flooded, there is nowhere for the sewage to flow. Infiltration and lack of treatment can lead to overloaded sewer lines that can back up into low-lying areas and homes. Even when it is diluted by flood waters, raw sewage can be a breeding ground for bacteria such as e. coli and other disease-causing agents.

The second type of health problems arise after most of the water has gone. Stagnant pools can become breeding grounds for mosquitoes, and wet areas of a building that have not been properly cleaned breed mold and mildew. A building that is not thoroughly cleaned becomes a health hazard, especially for small children and the elderly.

Another health hazard occurs when heating ducts in a forced air system are not properly cleaned after inundation. When the furnace or air conditioner is turned on, the sediments left in the ducts are circulated

throughout the building and breathed in by the occupants. If a city or county water system loses pressure, a boil order may be issued to protect people and animals from contaminated water.

The third problem is the long-term psychological impact of having been through a flood and seeing one's home damaged and irreplaceable keepsakes destroyed. The cost and labor needed to repair a flood-damaged home puts a severe strain on people, especially the unprepared and uninsured. There is also a long-term problem for those who know that their homes can be flooded again. The resulting stress on floodplain residents takes its toll in the form of aggravated physical and mental health problems.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed further below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City of Citrus Heights include the following:

- Climate change is likely to exacerbate future flood conditions and associated impacts and vulnerability of the City to 1% and 0.2% annual chance flooding. This was discussed in greater detail in the Climate Change and Flood section of the Hazard Profile above.
- Future population growth should be considered, as having more or less people in a community affects the overall hazard vulnerability to the City. The City has 36 areas where future development is expected to occur in the next five years. 4 of these active development areas, would place additional population in the 1% and 0.2% annual chance floodplains. Additional population growth would likely bring continued diversity to the County. Vulnerable population groups could face disproportionate effects from flooding and should be planned for. These limited changes in population and population patterns may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the location of future flood events.
- Land use planning should be proactive to address future hazard conditions. The City has 36 areas where future development is expected to occur in the next five years. However, City building codes and the City's floodplain management ordinance are in effect to reduce this risk and should be updated as necessary to continue to address future flood conditions. As such, changes in land use and future development may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the location of future flood events.

Future Development

This section provides an analysis of the flood hazard and proposed future development within the City based on FEMA floodplains and also discusses considerations in evaluating future flooding conditions.

Future Development: General Considerations

Communities that participate in the NFIP adopt regulations and codes that govern development in special flood hazard areas (SFHAs) and enforce those requirements through their local floodplain management ordinances through the issuance of permits. The City's floodplain management ordinance provides standards for development, subdivision of land, construction of buildings, and improvements and repairs to buildings that meet or exceed the minimum requirements of the NFIP.

The International Residential Code (IRC) and International Building Code (IBC), by reference to ASCE 24, include requirements that govern the design and construction of buildings and structures in flood hazard areas. FEMA has determined that the flood provisions of the I-Codes are consistent with the requirements of the NFIP (the I-Code requirements either meet or exceed NFIP requirements). ASCE 7 and ASCE 24, design standards developed by the American Society of Civil Engineers, expands on the minimum NFIP requirements with more specificity, additional requirements, and some limitations. Adoption of latest edition of the California Building Standards Code (CBSC), the 2025 triennial edition is based on the 2024 IBC and 2024 IRC, with and effective dated of January 1, 2026. The previous edition was the 2022 triennial edition, based on the 2021 IBC and 2021 IRC and was effective from 1/1/2023 until 12/31/2025. CA DWR has also developed a California State Model Flood Damage Prevention Ordinance to work with the flood provisions of the CBSC (CCR Title 24) for buildings and structures in special flood hazard areas. CA DWR has also prepared sample language to modify local floodplain management regulations.

With the adoption of the CBSC and the International Codes, communities are moving towards a more stringent approach to regulatory floodplain management, beyond the minimum requirements of the NFIP. The adoption and enforcement of disaster-resistant building codes is a core community action to promote effective mitigation. When communities ensure that new buildings and infrastructure are designed and constructed in accordance with national building codes and construction standards, they significantly increase local resilience now and in the future. With continued advancements in building codes, local ordinances should be reviewed and updated to meet and exceed standards as practicable to protect new development from future flood events and to further promote disaster resiliency.

One of the most effective ways to reduce vulnerability to potential flood damage is through careful land use planning that fully considers applicable flood management information and practices. Master planning will also be necessary to assure that open channel flood flow conveyances serving the smaller internal streams and drainage areas are adequately prepared to accommodate the flows. Preservation and maintenance of natural and riparian areas should also be an ongoing priority to realize the flood control benefits of the natural and beneficial functions of these areas.

The potential for flooding may increase as floodwaters are channeled due to land development. Such changes can exacerbate flooding problems inside and outside of natural floodplains by altering or confining natural drainage channels. Floodplain modeling and master planning should be based on built out property

use to ensure that all new development remains safe from future flooding. While local floodplain management, stormwater management, and water quality regulations and policies address these changes on a site-by-site basis, their cumulative effects can have a negative impact on the overall floodplain.

The City enforces its floodplain management ordinance. If any development is to occur in the floodplain, it would have to conform to the elevation and other standards of the floodplain ordinance. More detail on the specifics of the floodplain ordinance can be found in the Capability section below.

Future development areas and their vulnerability to 1% and 0.2% annual chance flood are discussed further in the below GIS analysis.

GIS Analysis

The City provided 36 future development areas which were used as the basis for the inventory of future development for the City. These areas were mapped in GIS. Utilizing the future development area spatial layer, the parcel polygon data was intersected to determine the future development areas within each DFIRM flood zone. Figure A-21 shows the locations of the future development area overlayed on the DFIRM flood zones. Some of these future development areas fall within the mapped flood areas as shown on Table A-34. As shown in the map and table, two of these future development areas sit in the 1% annual chance flood zone, while four more sit in the 0.2% annual chance flood zone.

Figure A-18 City of Citrus Heights – Future Development Areas in FEMA DFIRM Flood Zones

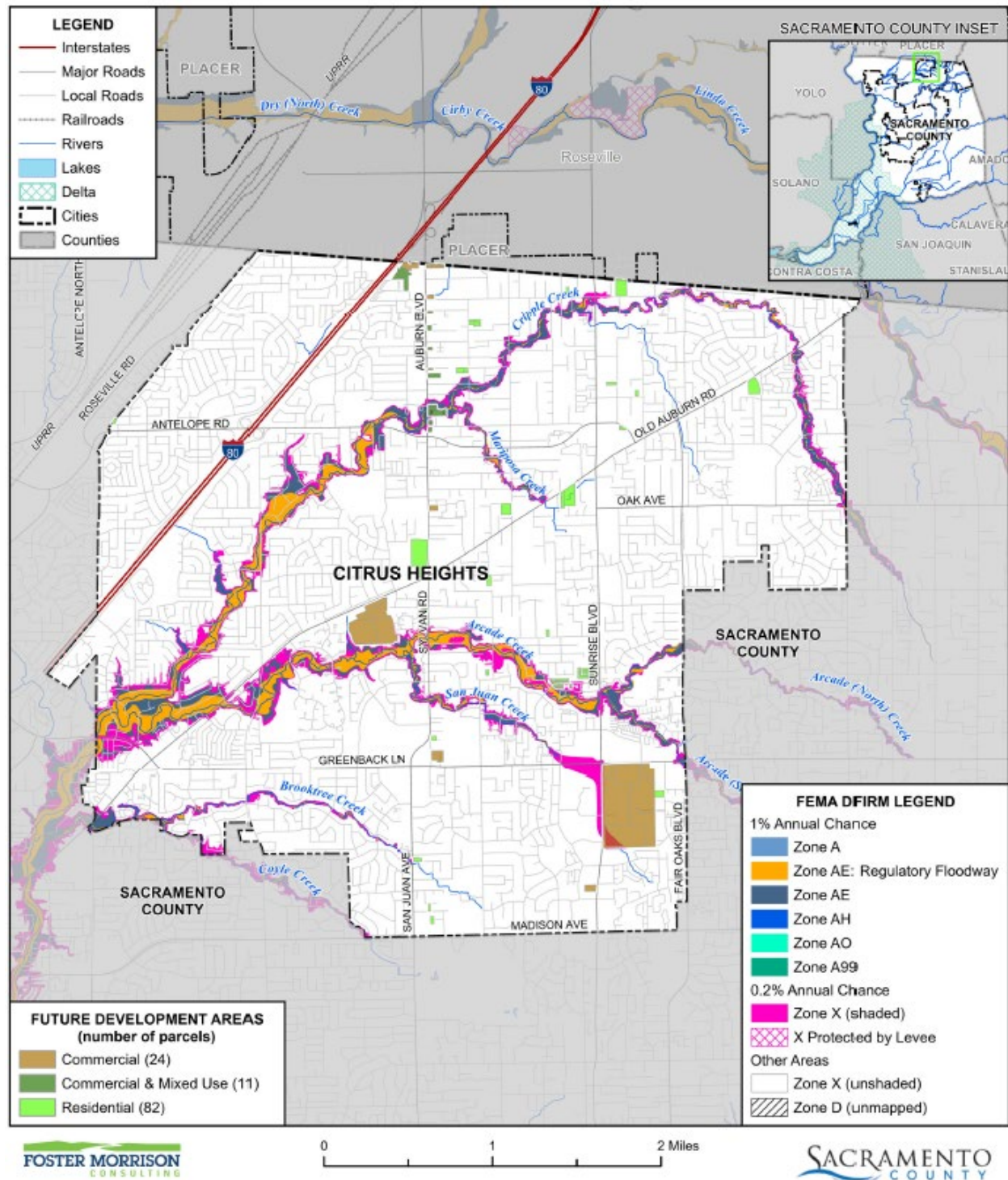


Table A-29 City of Citrus Heights – Future Development Areas by Development Type and Status with Parcels and Acres in FEMA DFIRM Flood Zones

Flood Zones / Future Development Type and Status	Site/Location Name	Total Parcel Count	Improved Parcel Count	Unimproved Parcel Count	Total Acres	Total Improved Acres	Total Unimproved Acres
1% Annual Chance Flood Hazard							
Commercial & Mixed Use							
In Construction	CIP - Auburn Boulevard Complete Streets Phase 2	3	1	2	3.4	0.4	3.1
	In Construction Total	3	1	2	3.4	0.4	3.1
Commercial & Mixed Use Total		3	1	2	3.4	0.4	3.1
Residential							
In Construction	Habitat for Humanity Sayonara Subdivision	21	0	21	1.8	0.0	1.8
	Unknown Total	21	0	21	1.8	0.0	1.8
Residential Total		21	0	21	1.8	0.0	1.8
1% Annual Chance Flood Hazard Total		24	1	23	5.2	0.4	4.9
0.2% Annual Chance Flood Hazard							
Commercial							
Entitlements Phase	Sunrise Tomorrow Sports Center	1	1	0	12.4	12.4	0.0
	Entitlements Phase Total	1	1	0	12.4	12.4	0.0
Planned	Sunrise Tomorrow Special Planning Area	3	3	0	49.4	49.4	0.0
	Planned Total	3	3	0	49.4	49.4	0.0
Commercial Total		4	4	0	61.8	61.8	0.0
Commercial & Mixed Use							
In Construction	CIP - Auburn Boulevard Complete Streets Phase 2	1	1	0	0.4	0.4	0.0

Flood Zones / Future Development Type and Status	Site/Location Name	Total Parcel Count	Improved Parcel Count	Unimproved Parcel Count	Total Acres	Total Improved Acres	Total Unimproved Acres
	In Construction Total	1	1	0	0.4	0.4	0.0
Commercial & Mixed Use Total		1	1	0	0.4	0.4	0.0
Residential							
In Construction	Habitat for Humanity Sayonara Subdivision	7	0	7	0.6	0.0	0.6
	Unknown Total	7	0	7	0.6	0.0	0.6
Residential Total		7	0	7	0.6	0.0	0.6
0.2% Annual Chance Flood Hazard Total		12	5	7	62.7	62.2	0.6

Source: FEMA DFIRM 02/2024, City of Citrus Heights

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

Hazard Profile

Flooding occurs in areas other than the FEMA mapped 1%, 0.5%, and 0.2% annual chance floodplains. Flooding may be from drainages not studied by FEMA, lack of or inadequate drainage infrastructure, or inadequate maintenance. Localized, stormwater flooding occurs throughout the City, during the rainy season from November through April. Prolonged heavy rainfall (including that from atmospheric river events) contributes to a large volume of runoff resulting in high peak flows of moderate duration. Rain on snow events occurring in the upper elevations can also be significant and contribute to greater downstream runoff and flooding during large storm events.

Location and Extent

The City of Citrus Heights is subject to localized flooding throughout the City. Areas prone to localized flooding are included in Table A-35 below. Flood extents are usually measured in areas affected, velocity of flooding, and depths of flooding. Expected flood depths in the City vary by location. Flood durations in the City tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Localized flooding in the City tends to have a shorter speed of onset, especially when antecedent rainfall has soaked the ground and reduced its capacity to absorb additional moisture.

Past Occurrences

Disaster Declaration History

There have been no state or federal disaster declarations from localized floods. There would most likely have been localized flood events during the disaster declarations from flood as shown in the previous 1%/0.5%/0.2% annual chance flood section.

NCDC Events

The NCDC occurrences of localized flooding are included in the 1%, 0.5%, and 0.2% annual chance flood hazard profile above where past flood events were noted.

City of Citrus Heights Events

These sections first show historic hazard events occurring since the 2021 LHMPs and then those occurring prior to the 2021 LHMP.

Events since 2021 LHMP

The City noted that the times of flooding and localized flooding have coincided. This includes the following events:

The City saw heavy rains in late **April of 2026**. Street flooding occurred which impacted both residences and transportation routes. Areas affected included Blayden Court, Olivine Avenue, Greenback Lane, and Fair Oaks Boulevard. Examples of some areas can be seen on the images in Figure A-22.

Figure A-19 April 2026 Localized Flooding



Source: City of Citrus Heights

The City experienced impacts from storms during winter **2024 and 2025**; however, no disaster declarations were published for these storms. Specific damages were not identified.

The City experienced localized flooding during **December 27, 2022 to January 31, 2023**, resulting in a Disaster Declaration. Damages included infrastructure such as signal light poles and lights, downed trees in roads causing traffic impacts, downed trees in creeks causing flooding and power outages. The following damage estimates were determined from Service Requests and Work Orders associated with the time period storm:

➤ Localized Flooding:	\$58,613.07
➤ Pavement Damage:	\$224,910.18
➤ Power Outage:	\$14,737.52
➤ Tree Damage:	\$85,244.81
➤ Total:	\$383,595.58

Events prior to 2021

Between **2016 and 2021**, there had been eight storm events resulting 178 reports from the public of minor localized flooding of roadways, but no impacts beyond normal operations. The City primarily attributes this to judicious creek maintenance by City staff and contracts.

Between **2006 and 2011**, the City experienced 3 occurrences of severe localized flooding caused by a combination of a heavy rain cell and in 2 of the instances excessive tree leaves plugging inlets. In the 3 occurrences, anywhere from a half dozen to as many as 20+ homes flooded. The dates of the 3 events included **February 24, 2011; December 12, 2012, and December 3, 2014**. House flooding in each of the events never exceeded a foot in depth within the home or business and in every case, the water receded within 45 minutes of flooding the home.

Climate Change and Localized Flood

It is likely that climate change will increase the chance of future occurrence as well as future impacts from localized flood. More information on future impacts to the City can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

Even if average annual rainfall may decrease slightly, the intensity of individual rainfall events is likely to increase during the 21st century, increasing the likelihood of overwhelming stormwater systems built to historical rainfall averages. This makes localized flooding more likely.

Vulnerability to Localized Flood

Flood vulnerability and their impacts vary by location and severity of any given flood event and will likely only affect certain areas of the City during specific times. Based on the risk assessment, it is evident that floods will continue to have potentially significant impacts to certain areas of the City. However, while flooding can cause significant impacts, depending on the duration and volume of precipitation and the drainage in any given area, many of the floods in the City are minor, localized flood events that are more of a nuisance than a disaster.

Many areas of the City are at some measure of vulnerability to localized flooding. An assessment of a community's vulnerability to localized flooding begins with an understanding of local exposure to localized

flooding. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Historically, the City has been affected by flooding of streams and creeks occurring during heavy rain and storm (including atmospheric river) events. Additional development in the City and in the watersheds of these streams affects both the frequency and duration of damaging floods through an increase in stormwater runoff and contributes to localized flooding occurring in areas throughout the City. The lack of or inadequate drainage infrastructure in the City contributes to localized flooding issues

The City tracks localized flooding areas. Affected localized flood areas identified by the City of Citrus Heights are summarized in Table A-35.

Table A-30 City of Citrus Heights – List of Localized Flooding Problem Areas

Road Name/Area	Issues	Road Impacts?	Home/ Business Impacts?	Evacuation Route?
Auburn Bl @ Greenback Bl	First rain debris	Y Slowed traffic	X	X
Brookdale Dr (7400)	First rain debris	Y Slowed traffic	Y	X
Greenback Ln (6529)	First rain debris	Y Slowed traffic	X	X
Greenback Ln (7548)	First rain debris	Y	X	X
Greenback Bl @ Patterson	First rain debris	Y	X	X
Sunrise Bl (5406)	First rain debris	Y	X	X
Sunrise Bl (5900)	First rain debris	Y	X	X
Sylvan Oak Wy (7960)	First rain debris	Y	X	X
Tiara Wy (7856)	First rain debris	Y	X	X
Viscount Wy (6531)	First rain debris	Y	X	X
Amsel Court	Inadequate area for overland flow release	Y	Local flooding impacting private property	Y available but not likely needed
Blayden Court	Inadequate area for overland flow release	Y	Local flooding impacting private property	Y available but not likely needed

Road Name/Area	Issues	Road Impacts?	Home/ Business Impacts?	Evacuation Route?
Chula Vista Drive	Inadequate storm pipe capacity.	Y	Maintenance access and flooded ditches potentially impact private property	Y available but not likely needed
City Wide Indian River at Arcade Creek Metheny Way at Arcade Creek Arcade-Cripple Creek Trail Crossing at Arcade Creek	Creek Erosion & Bridge Scour	N	Potential environmental and structural damage	Y available but not likely needed
Cripple Creek Edgecliff Open Space near Newbridge Way Gingerblossom Canal near Garden Gate Drive	Stream bed erosion threatening private and City owned properties	Y	Potential environmental, private and City owned property	Y available but not likely needed
Mariposa-Sylvan Valley Way	Existing storm drain pipes are undersized resulting in localized flooding	Y potential flooding on East side of Mariposa Ave	Potential damage to roadways	Y available but not likely needed
Minnesota Drive Anderson Lane and Candy Lane	Existing storm drain pipes are undersized resulting in localized flooding	Y	Potential damage to roadways	Y available but not likely needed
Wonder Street	Localized flooding	Y	Potential damage to roadway	Y available but not likely needed
Drainage Master Plan City wide Neighborhoods 1-5 and 11.	Localized flooding	Y potential roadway flooding in various spots	Potential private property City property and business impacts	Y for each neighborhood

Source: City of Citrus Heights

As identified in the City's Drainage Master Planning efforts and Mitigation Actions #6, 7, 9, 10, and 15; Local Storm Drain infrastructure was developed primarily in the 1960's and 1970's, these systems have proven to be undersized for modern storms. In addition, many of the materials used for storm drain pipes (corrugated metal) have exceeded their design life and are in need of replacement as well as upsizing. The City is actively pursuing grant opportunities to obtain necessary funding for the cost to replace known deficiencies and develop more drainage master plan studies.

Assets at Risk

Assets at risk from localized flood include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

People and populations (including vulnerable populations) are traditionally not highly vulnerable to localized flooding, but their structures and contents can be at risk. Localized flooding may also cause transportation issues as roads and lanes are impacted or closed and affect the ability for people to travel throughout the City.

Structures

Structures in areas with localized flooding can be affected if floodwaters intrude into the structure. Structures in low lying areas, or those with basements can be at greater risk. Buildings with older foundations that are prone to water intrusion are also at greater risk. Once water finds its way into a structure, it tends to continue to do so until the path that brings water into a structure is mitigated. Structures can also be damaged by trees that have become uprooted and fall during rain and storm events. Large trees falling onto structures can cause significant damage.

Critical Facilities and Infrastructure

Localized flooding, while often more of a nuisance, can cause damage to critical facilities and infrastructure during a heavy rain and storm event. Any facility that experiences localized flooding can be impacted. Utilities and other critical infrastructure can all be affected, causing interruptions in service until repairs can be made. For example, water and wastewater systems can be vulnerable to heavy rains and flood events. Rainfall creates a high water table, surging streams and creeks, and saturates soil. Infiltration of stormwater into water and wastewater systems may occur and presents a threat to public health and safety, when the infrastructure is no longer able to meet operational needs and local demands. Other critical facilities such as roads, bridges and other transportation facilities can also experience localized flooding causing road closures and other impacts until storm waters recede. This can result in extended road closures requiring alternate routes.

Natural, Historic, and Cultural Resources

Natural resource assets may have some vulnerabilities to localized flood during major storm events, but can benefit from floodwaters, often by design. Many parks and green spaces are designed to take overflow water and release it into the underlying soils and natural areas. Wetland areas in the City actually help reduce the risk of flooding, as they can absorb excess rainfall that would have to be drained away from impervious surfaces. Flooding can provide many benefits to the natural environment, including recharging wetlands and groundwater, increasing fish production, creating wildlife habitat, and rejuvenating soil fertility. These smaller localized flooding events often provide more benefits to the environment in comparison to negative impacts associated with large flood events. Historic and cultural resources may be at some measure of vulnerability if they are located in areas subject to repeated localized flooding.

Impacts from Localized Flood

Primary concerns associated with stormwater flooding include impacts to infrastructure that provide a means of ingress and egress throughout the community. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways and other critical infrastructure. Objects can also be buried or destroyed through sediment deposition. Floodwaters can break utility lines and interrupt services. Standing water can cause damage to crops, roads, and foundations. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

Life safety issues from localized flooding would be more limited. The amount and type of damage or flooding that occurs varies from year to year and from storm to storm, depending on the quantity of precipitation and runoff.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the Likelihood of Future Occurrence discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City of Citrus Heights include the following:

- Climate change is likely to exacerbate future heavy rain conditions and associated impacts and vulnerability of the City to localized flood. This was discussed in greater detail in the Climate Change and Localized Flood section of the Hazard Profile above.
- The City is expected to see slow and steady growth. The City has 36 areas planned for development in the next five years. Additional population growth would likely bring continued diversity to the City. This can also impact the vulnerable populations, like low-income individuals and households living in areas that are typically more hazardous. Vulnerable population groups such as low-income individuals and households living in flood prone areas could face disproportionate effects from localized flood and should be planned for. Changes in population and population patterns may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the location of future flood events.
- Land use planning should be proactive to address future hazard conditions. The City has 36 areas planned for development in the next five years. Development in more urban areas causes an increase in peak flow and stormwater runoff. Such growth will consume previously undeveloped acres, and the impacts may overwhelm existing drainage and flood control facilities. Locating new development, structures and critical facilities and infrastructure within or near areas of localized flooding risk may

put additional development at risk. However, City building codes, including the City’s Floodplain Management Ordinance, are in effect to reduce this risk and should be updated as necessary to continue to address future localized flood conditions. Depending on the location of new development and adherence to protective building codes, changes in land use and development may or may not increase the impacts and associated vulnerabilities of the City to this hazard.

Future Development

The City will need to be proactive to ensure that increased development has proper siting and drainage for stormwaters. The risk of localized flooding to future development can also be minimized by accurate recordkeeping of repetitive localized storm activity. Mitigating the root causes of the localized stormwater flooding will reduce future risks of losses.

Severe Weather: Extreme Cold and Freeze

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

Hazard Profile

According to the National Weather Service (NWS) and the Western Regional Climate Center (WRCC), extreme cold often accompanies a winter storm or is left in its wake. Prolonged exposure to cold can cause frostbite or hypothermia and can be life-threatening. Infants and the elderly are most susceptible. Pipes may freeze and burst in homes or buildings that are poorly insulated or without heat. Freezing temperatures can cause significant damage to agricultural industry.

Location and Extent

Extreme cold and freeze events occur on a regional basis. Extreme cold can occur in any location of the City. All portions of the City are at risk to extreme cold. While there is no scale (i.e. Richter, Enhanced Fujita) to measure the effects of freeze, temperature data for the County from the WRCC indicates that there are 8.3 days that fall below 32°F. Freeze has a slow onset and can generally be predicted in advance for the City. Freeze events can last for hours (in a cold overnight), or for days to weeks at a time. Extreme cold can occur in any location of the City. All portions of the City and County are at risk to extreme cold and freeze.

Past Occurrences

Disaster Declaration History

The County has had no past federal or state disaster declarations for extreme cold and freeze. There have been USDA Secretarial Disaster declarations. As shown in Table 4 6, there have been 3 freeze declarations in Sacramento County since 2012. All 3 freeze declarations have occurred since 2021, as discussed in Section 4.3.2 of the Base Plan. Some of these events may have affected the City.

NCDC Events

The NCDC data shows 16 extreme cold and freeze incidents for Sacramento County since 1993, some of which likely affected the City.

City of Citrus Heights Events

The City noted that cold and freeze events can occur each year. Past events where damages in the City occurred could not be recalled. It was noted that events that affected the greater County that were discussed in Section 4.3.2 of the Base Plan also likely affected the City.

Climate Change and Extreme Cold and Freeze

According to the 2024 CAS, freezing spells are likely to become less frequent in California as climate temperatures increase; if emissions increase, freezing events could occur only once per decade in large portion of the State by the second half of the 21st century. According to a California Natural Resources Report in 2014, it was determined that while fewer freezing spells would decrease cold related health effects, too few freezes could lead to increased incidence of disease as vectors and pathogens do not die off.

According to the 2024 CAP, which utilized Cal Adapt to model potential climate change impacts to Sacramento County, annual average low temperatures in Sacramento County of 48.4°F (from 1961-1990) would increase under the medium admissions scenario by 3.8°F to 52.2°F in the mid-century, and by 5.0°F to 53.4°F in the late century. Under the high emissions scenario, the average annual low temperature is projected to increase by 4.8°F to 53.2°F in the mid-century, and by 8.4°F to 56.8°F in the late century. This can be seen in Section 4.3.2 of the Base Plan.

Vulnerability to Extreme Cold and Freeze

Extreme cold and freeze events happen in the City each year. Cold and freeze can impact both structures and populations in the City. The whole of the City and County Planning Area has some measure of vulnerability to extreme cold and freeze.

An assessment of a community's vulnerability to this hazard begins with an understanding of local exposure to City. This is included in the Local Concerns section below. After that, vulnerability is discussed in multiple sections that detail how this hazard can affect the City. These sections include assets at risk, impacts, and how future development and future conditions can be affected by this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Local concerns from extreme cold and freeze events are primarily to the health and care for homeless and vulnerable populations. Freeze conditions are usually short lived and have not affected power service or induced any known traffic hazards due to impaired roadways conditions.

Assets at Risk

Assets at risk from extreme cold and freeze include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations within the City are vulnerable to extreme cold and freeze, but this hazard generally affects vulnerable populations and those spending large amounts of time outside. Prolonged exposure to cold can cause frostbite or hypothermia and can be life-threatening. Vulnerable populations to cold and freeze include the unhoused; individuals who exercise or train outdoors; outdoor workers; individuals that lack the resources to afford heat; and the young, old, or medically fragile individuals that are more susceptible to cold related impacts. In addition to vulnerable populations, pets and livestock are at risk to freeze and cold.

Structures

Structures in the City have some measure of risk from extreme cold and freeze. Buildings can be affected directly by freeze, pipes that feed buildings can be damaged during periods of extreme cold and cause water damage and other related impacts to a structure. Structures can also be damaged by downed trees during freeze and winter storm events.

Critical Facilities and Infrastructure

Extreme cold and freeze, occasionally accompanied by high winds, can cause downed trees and power lines, power outages, accidents, and road closures. Transportation networks, communications, and utilities infrastructure are the most vulnerable physical assets in the City. Depending on the facility type and function, critical facilities and infrastructure may be affected directly by freeze. Damage to pipes that feed buildings can be damaged during periods of extreme cold. Other equipment may also be affected. Infrastructure such as roads, highways, and bridges can become slippery, causing accidents and road closures.

Natural, Historic, and Cultural Resources

Depending on how low the temperatures go and the duration of an extreme cold and freeze event, natural resources in the City may be affected. During periods of freeze, trees in the City may be damaged. This is especially true if a freeze occurs during a winter storm with winds and precipitation. Other natural resources like wildlife may be at risk during a period of freeze. While it is rare for historic buildings to be affected directly by freeze, damages to pipes that feed historic buildings can be damaged during periods of extreme cold and cause additional impacts to the structures.

Impacts from Severe Weather: Extreme Cold and Freeze

Extreme cold and freeze can affect critical facilities and infrastructure, down trees, break pipes, and can be a life safety issue. Transportation networks, communications, and utilities infrastructure are often the most vulnerable physical assets in the City. Infrastructure such as roads and utilities are at risk to freezing temperatures causing failures and hazardous road conditions. When extreme cold is coupled with high winds and freezing storms, power lines may be downed, resulting in power outages and an interruption of utilities and critical services. During periods of extremely low or prolonged cold temperatures, other impacts to the City can include interruption in business and school activities.

The elderly, the young, and those experiencing medical issues are often more vulnerable to temperature extremes, but anyone can be affected. Exposure to cold temperatures can cause hypothermia and frostbite. Those exercising or recreating outdoors, outdoor workers, and the unhoused may be at a higher risk.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the Likelihood of Future Occurrence discussion above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on these factors for the City include the following:

- Climate change is unlikely to exacerbate extreme cold and freeze and their associated impacts to the City. This was discussed in greater detail in the Climate Change and Extreme Cold and Freeze section of the Hazard Profile above.
- The City is expected to see slow and steady growth. Additionally, the City has 36 areas planned for development in the next five years. Future population growth should be considered, as having more or less people in a community affects the overall hazard vulnerability to the City. Changes in population patterns should also be considered. Especially vulnerable individuals to this hazard include older adults, children, those below the poverty line, the unhoused, and those that work and recreate outdoors. During hazard events, existing inequities can get worse, and these groups are the most likely to be affected and may require extra assistance. Planning for population changes will help to decrease the City's overall vulnerability to this hazard. Changes in population and population patterns may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of population growth and continued planning for future hazard conditions.
- Land use planning should be proactive to address future hazard conditions. 36 developments are expected to be built in the next five years. City building codes are in effect to reduce this risk and

should be updated as necessary to continue to address future freeze and extreme cold conditions. Due to adherence to protective building codes, changes in land use and development will likely not increase the impacts and associated vulnerabilities of the City to this hazard.

Future Development

Future development built to code should be able to withstand extreme cold and freeze. Current building codes provide such provisions for new construction. New and existing critical facilities and infrastructure should also consider adding backup power systems to limit impacts associated with power outages. Older buildings and infrastructure should be evaluated to ensure that extreme cold and freeze will not cause negative impacts. Future development considerations should be ongoing and proactive. Ensuring that comprehensive land use planning is conducted, regulatory requirements such as building codes are followed, and varying needs for different demographic groups that reside within the City are considered can help make for a more resilient community.

Severe Weather: Extreme Heat

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Medium

Hazard Profile

According to FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and lasts for several weeks. Heat kills by taxing the human body beyond its abilities. In extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature.” Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, those who are sick or overweight, and those that work or recreate outdoors are more likely to experience heat exhaustion or succumb to extreme heat.

In addition to the risks faced by populations in the City, there are risks to the built environment from extreme heat. While extreme heat on its own does not usually affect structures, extreme heat during times of drought can cause wildfire risk to heighten. Extreme heat can lead to interruptions in power, power outages, and when combined with high winds, to Public Safety Power Shutdown (PSPS) events, creating significant issues in the City.

Urban Heat Island

Large, urbanized areas can experience higher temperatures, greater pollution and more negative health impacts during hot summer months when compared to more rural communities. This phenomenon is known as an urban heat island. Heat islands are created by a combination of heat-absorptive surfaces (such as dark pavement and roofing), heat-generating activities (such as engines and generators) and the absence of vegetation (which provides evaporative cooling). According to the Sacramento County Air Quality Management District (SCAQMD) and the U.S. Environmental Protection Agency, daytime temperatures in urban areas are on average 1-6°F higher than in rural areas, while nighttime temperatures can be as much as 22°F higher as the heat is gradually released from buildings and pavement. The Urban Heat Island Index,

developed by the California Environmental Protection Agency and adapted by SCAQMD), quantifies the extent and severity of urban heat islands for individual cities, including urban heat island interactive maps that show the urban heat island effect for each census tract in and around most urban areas throughout the State. This was shown in Section 4.3.3 of the Base Plan.

Location and Extent

Heat is a regional phenomenon and affects the whole of the City. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly affect general and vulnerable populations and communities. Heat waves do not generally cause damage or elicit the immediate response of floods, fires, earthquakes, or other more “typical” disaster scenarios. The City experiences temperatures in excess of 100°F during the summer and fall months. The temperature moves to 105-110°F in rather extreme situations.

The NWS has in place a system to initiate alert procedures (advisories or warnings) when extreme heat is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. This can be seen in Section 4.3.3 of the Base Plan.

Past Occurrences

Disaster Declaration History

There have been no federal or state disaster declarations from extreme heat.

NCDC Events

The NCDC data shows 68 extreme heat incidents for Sacramento County since 1993, some of which likely affected the City.

City of Citrus Heights Events

The City noted that extreme heat events can occur in the summer each year. Past events where damages in the City occurred could not be recalled. It was noted that events that affected the greater County that were discussed in Section 4.3.3 of the Base Plan also affected the City.

Climate Change and Extreme Heat

The 2024 CAS, citing a California Energy Commission study, states that “over the past 15 years, heat waves have claimed more lives in California than all other declared disaster events combined.” This study shows that California is getting warmer, leading to an increased frequency, magnitude, and duration of heat waves. These factors may lead to increased mortality from excessive heat.

As temperatures increase, California and Sacramento County will face increased risk of death from dehydration, heat stroke, heat exhaustion, heart attack, stroke and respiratory distress caused by extreme heat. According to the 2024 CAS report and the 2023 State of California Hazard Mitigation Plan, by 2100, hotter temperatures are expected throughout the state, with projected increases of 3-5.5°F (under a lower emissions scenario) to 8-10.5°F (under a higher emissions scenario). These changes could lead to an increase in deaths related to extreme heat in Sacramento County and the City.

According to the 2024 CAP, the County has experienced, and is projected to continue experiencing, increases in average annual temperature and extreme heat, which could lead to an array of potential impacts. According to Cal-Adapt, the average annual maximum and minimum temperature across Sacramento County are both projected to rise between 5 and 9 degrees Fahrenheit (°F) from their respective historic averages by the end of the century as a result of climate change.

Vulnerability to Severe Weather: Extreme Heat

Extreme heat is becoming more frequent, intense, longer lasting and geographically widespread. Extreme heat occurs on an annual basis in the County and the City. In recent years, compounded by climate change conditions, summer months continue to get a bit hotter. The whole of the City is at some measure of vulnerability to extreme heat. An assessment of a community's vulnerability to extreme heat begins with an understanding of local exposure to extreme heat. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Local concerns from extreme heat include the health and care for the homeless and vulnerable populations, impacts and loss of trees/landscaping, and reliability of the power grid to maintain service in high-demand periods.

Assets at Risk

Assets at risk from extreme heat include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations within the City are vulnerable to extreme heat, but it generally affects people spending large amounts of time outside or without means of cooling indoor structures and other vulnerable populations. During extended periods of high temperatures, extreme heat may overload the demands for electricity to run air conditioners and can present health concerns to individuals. When interruptions in power occur during extreme heat, the risk of heat related illnesses and deaths increases. Extreme heat is a significant concern to vulnerable populations. The unhoused; individuals who exercise or train outdoors; outdoor workers; individuals that lack the resources to afford air conditioning; and the young, old, or medically

fragile individuals are generally more susceptible to heat related impacts. In addition to vulnerable populations, pets and livestock are at risk to extreme heat conditions.

Structures

Extreme heat normally does not generally impact structures, but individuals working in structures may be affected during periods of extended heat, especially in structures that might not be equipped with air conditioning or other means of cooling. The City noted that extreme heat has caused interruptions to power in the past. Also depending on the structure, sensitive contents such as IT equipment can be impacted, especially if a power outage occurs.

Critical Facilities and Infrastructure

Depending on their type and function, critical facilities and infrastructure can also be affected by extreme heat. Extreme heat conditions can cause interruptions in power and other operational issues that can lead to system failures. Schools without air conditioning may have to close or operate on a reduced schedule.

Natural, Historic, and Cultural Resources

Natural resource assets, including those located in City parks and open space areas, may be vulnerable during periods of extreme heat. These include turfing areas; landscapes, City trees, wildlife and habitat areas, and wetlands and marsh lands. Recently, trees were lost in areas of the City that were weakened by drought and extreme heat. Extreme heat may also cause drought-like conditions, contributing to other issues. For example, several weeks of extreme heat increases evapotranspiration and reduces moisture content in vegetation, leading to higher wildfire vulnerability in the region for that time period, even if the rest of the season is relatively moist. Historic and cultural resources are not expected to be affected by extreme heat.

Impacts from Severe Weather: Extreme Heat

The City experiences temperatures in excess of 100°F during the summer and fall months. The temperature moves to 105-110°F in rather extreme situations. During these times, drought conditions may worsen, and the City may see an increase in dry fuels and tree dieback. Power outages may occur during these times as well. Health issues are a primary concern with this hazard, especially to vulnerable populations, although economic impacts can also occur.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile section above), changes in population patterns, and changes in land use and development. The influencing effects of these factors on this hazard are discussed further in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for City include the following:

- Climate change is likely to exacerbate future extreme heat conditions and associated impacts and vulnerability of the City. This was discussed in greater detail in the Climate Change and Extreme Heat section of the Hazard Profile above.
- Future population growth should be considered, as having more or less people in a community affects the overall hazard vulnerability to the City. The City is expected to see slow and steady growth. The City has 36 areas where growth is expected over the next five years. Any additional growth in the City would place additional populations at risk to extreme heat. As such, the vulnerability to this hazard is expected to increase. Any future low income and the unhoused populations are at risk to extreme heat which can put strain on emergency services and shelters. Changes in population and population patterns is likely to increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the nature and intensity of future extreme heat events.
- Land use planning should be proactive to address future hazard conditions. The City has 36 areas where growth is expected over the next five years. City building codes are in effect to reduce this vulnerability and should be updated as necessary to continue to address future extreme heat conditions. Due to adherence to protective building codes, changes in land use and development will likely not increase the impacts and associated vulnerabilities of the City to this hazard.

Future Development

Future development of new buildings in the City will likely not be affected by extreme heat. Extreme heat is more likely to affect vulnerable populations. Vulnerability to extreme heat will increase as the average age of the population shifts. It is encouraged that nursing homes and elder care facilities have emergency plans or backup power to address power failure during times of extreme heat. Low-income residents and unhoused populations are also more vulnerable and should be considered in future growth plans for the City. Cooling centers for these populations should be utilized when necessary. New and existing critical facilities and infrastructure should also consider adding backup power systems to limit impacts associated with power outages.

Severe Weather: Heavy Rains and Storms

Likelihood of Future Occurrence—Highly Likely

Vulnerability—Medium

Hazard Profile

Storms in the City occur annually and are generally characterized by heavy rain often accompanied by strong winds and sometimes lightning and hail. Approximately 10 percent of the thunderstorms that occur each year in the United States are classified as severe. A thunderstorm is classified as severe when it contains one or more of the following phenomena: hail that is three-quarters of an inch or greater, winds in

excess of 50 knots (57.5 mph), or a tornado. Heavy precipitation in the City falls mainly in the fall, winter, and spring months. Wind often accompanies these storms; hail and lightning are rare in the City. In recent years, heavy rain and storms have been compounded by more frequent and higher intensity atmospheric river events. Rain on snow events occurring in the upper elevations can also be significant and contribute to greater downstream runoff and flooding during large storm events.

Location and Extent

Heavy rain events occur on a regional basis. Rains and storms can occur in any location of the City. All portions of the City are at risk to heavy rains and storms. Most of the severe rains occur during the fall, winter, and spring months in the City as discussed below (with problem flooding areas associated with heavy rains and storms shown in Table A-35 in the Flood: Localized Stormwater section). There is no scale by which heavy rains and severe storms are measured. Magnitude of storms is measured often in rainfall and damages. The speed of onset of heavy rains can be short, but accurate weather prediction mechanisms often let the public know of upcoming events. Hail and lightning are rarer in the City and Sacramento County. Duration of severe storms in the City can range from minutes to hours to days. According to the WRCC, average annual precipitation in the County is 18.15 inches per year. Information on precipitation extremes can be found in Section 4.3.4 of the Base Plan.

Past Occurrences

Disaster Declaration History

According to historical hazard data, severe weather, including heavy rains and storms, is an annual occurrence in the City. This contributes to many of the federal disaster declarations related to flooding. Disaster declarations from flooding are shown on Table A-36, many of which likely affected the City.

Table A-31 Sacramento County – State and Federal Disaster Declarations from Flood (Heavy Rain and Storms) 1950-2025

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Flood (including heavy rains and storms)	26	1950, 1955, 1958 (twice), 1963, 1969, 1982 (twice), 1983, 1986, 1995 (twice), 1996, 1997, 1998, 2008, 2017 (three times), 2022*, 2023 (three), 2024 (twice)	18	1955, 1958, 1964, 1969, 1983, 1986, 1995 (twice), 1997, 1998, 2006, 2017 (three times), 2023 (three times)*, 2024*

Source: Cal OES, FEMA

*included a landslide component.

NCDC Events

The NCDC data recorded 9 hail, 29 heavy rain, 1 lightning, and 2 winter storm weather incidents for Sacramento County since 1950, which likely affected the City. Winter weather events tend to be rain in the County.

City of Citrus Heights Events

The City noted that heavy rains and storms are an annual occurrence. Other events causing issues are listed in the Past Occurrences section of the Flood: 1%/0.2% Annual Chance and Flood: Localized Stormwater Flooding discussions above. Hail is rare in Citrus Heights; pea size hail occurred **May 2, 2023, and March 17, 2025**. The accumulation is short lived and had minimal impact on the City. Lightning often accompanies rainstorms but has no significant impact on the City. No known fires in the City have been ignited due to lightning.

Climate Change and Heavy Rains and Storms

It is likely that climate change will increase the chance of future occurrence as well as future impacts from heavy rains and storms. More information on future impacts to the City can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

According to the 2024 CAS, while average annual rainfall may increase or decrease slightly, the intensity of individual rainfall events is likely to increase during the 21st century. It is unlikely that hail will become more common in Sacramento County and the City of Citrus Heights. The amount of lightning is not projected to change.

Cal-Adapt noted that, on average, the projections show little change in total annual precipitation in California. Furthermore, among several models, precipitation projections do not show a consistent trend during the next century. Cal-Adapt modeled scenarios are shown in Section 4.3.4 of the Base Plan.

According to the 2024 CAP, the County is projected to experience a steady increase in average annual precipitation through the end of the century, with much of that precipitation likely to occur during extreme precipitation events, which can lead to flood impacts. According to Cal-Adapt, the historic average annual precipitation in Sacramento County is 18.3 inches, and the historic average annual number of extreme precipitation events is four. As shown in Section 4.3.4 of the Base Plan, the average annual precipitation across the County may rise upwards of 22 inches, with the number of extreme precipitation events potentially exceeding 7 per year by the end of the century, depending on the level of current and future GHG emissions.

Vulnerability to Heavy Rain and Storms

Heavy rain and severe storms are the most frequent type of severe weather occurrences in the City. These events can cause both significant and localized flooding. Flooding can be worse during times where the ground is already saturated. Wind often accompanies these storms and has caused damage in the past. Hail and lightning are rare in the City, but also can cause damage.

The whole of the City is at some measure of vulnerability to heavy rain and storms. An assessment of a community's vulnerability to heavy rains and storms begins with an understanding of local exposure to heavy rain and storms. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The City noted that a primary concern with heavy rains and storms is the localized flooding they cause in the City. The problem areas are shown on Table A-35 above.

Local concerns from heavy rains and storms include power outages, traffic impacts, downed trees, private property damage, structural damage, flooding, increased erosion and water pollution/water quality impacts. Most of the localized flooding in the City is generally limited to flooding within the street ROW and only has limited impact to private property.

Assets at Risk

Assets at risk from heavy rain and storms include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations (including vulnerable populations) in the City have some measure of risk to heavy rains and storms. Those populations that work or recreate outside and unhoused individuals are more vulnerable to impacts from heavy storm events. Heavy rains and storms occur every year and do not generally cause significant adverse impacts to individuals; it is the secondary hazard, flooding, which poses the biggest impact to people. Populations at risk to flooding resulting from heavy rains and storm events include those who live in floodplains (discussed in further detail in the Flood: 1%/0.2% Annual Chance section above) and those affected by localized flooding (discussed in further detail in the Flood: Localized Stormwater Flooding section above).

Structures

Structures in the City have some risk to heavy rains and storms. Structures built to modern building codes are built to withstand heavy rains and storms (including high winds and lightning). During a heavy storm, localized flooding may cause water intrusion into buildings from the outside. Trees can be downed causing impacts to structures. Older homes and buildings may be at increased risk to heavy rains and storms. Power outages during severe storm events can occur, impacting the use of structures until the power is back online.

Critical Facilities and Infrastructure

Heavy rain and storms can affect critical facilities and infrastructure during large events. Power outages may occur taking facilities offline. High winds can down power lines and trees impacting facilities. Water intrusion into facilities and infrastructure, such as water and wastewater facilities, can impact operations. City roads, streets, and bridges can be impacted resulting in closures restricting traffic flow in the City. In certain areas, large storms can cause erosion and localized landslides which can impact facilities. Many

critical facilities are built to modern design standards that take heavy rains and storms into account when siting and building these structures, and others may need to be retrofitted to better withstand these events.

Natural, Historic, and Cultural Resources

Large rain and storm events and associated flooding can affect natural, historic, and cultural resources. Silt and sediment can damage natural areas. Trees can be uprooted and downed by high winds. Extended periods of rainfall can erode natural banks along waterways and degrade soil stability for terrestrial species. While some natural systems can be adversely impacted during these large storms, heavy rain events can also provide benefits. Groundwater and wetland areas can be recharged and water supplies replenished. Historic and cultural resources may also be affected. Generally, the impacts are associated with damage to structures affected by large storm events, but other cultural resources such as those associated with Native Americans and old tribal areas can also be disturbed, damaged, and lost during extreme rain and storm and events.

Impacts from Heavy Rain and Storms

Impacts from heavy rains and storms include damage to property, critical facilities and infrastructure, and the natural landscape. This includes: erosion; downed trees; damaged utility structures and infrastructure; power outages; road damage and blockages; and even lightning strikes to critical infrastructure and people. Landsliding and erosion occur when the soil on slopes becomes oversaturated and fails. Climate change may cause these impacts to worsen.

Actual damage associated with the primary effects of severe storms and heavy rains has been somewhat limited. It is the secondary hazards caused by these severe weather events, such as floods, landslides, and erosion that would likely have the greatest impact.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile section above), changes in population patterns, and changes in land use and development. The influencing effects of these factors on this hazard are discussed further in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City include the following:

- Climate change is likely to exacerbate future heavy rain and storm conditions and associated impacts and vulnerability of the City to flooding. This was discussed in greater detail in the Climate Change and Heavy Rains and Storms section of the Hazard Profile above.

- The City is expected to see slow and steady growth. The City has 36 areas where growth is expected over the next five years. Certain vulnerable populations, such as the those who work or spend extended periods outdoors, could experience disproportional effects from this hazard. and should be addressed as the City continues to grow. Changes in population and population patterns may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the nature and intensity of future storm events.
- Land use planning should be proactive to address future hazard conditions. The City has 36 areas where growth is expected over the next five years. Changes in land use in these and other future development areas may also amplify the impacts of heavy rains and storms, as additional impervious surfaces can cause additional runoff and localized flooding throughout the City. However, changes in land use and future development may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth and continued planning for future hazard conditions and the nature and intensity of future storm events.

Future Development

Building codes in the City ensure that new development is built to current building standards, which should reduce the risk to future development in the City from heavy rains and storms. New critical facilities such should be built to withstand heavy rains, hail damage, lightning, and thunderstorm winds. New and existing critical facilities and infrastructure should also consider adding backup power systems to limit impacts associated with power outages. With adherence to development standards, future losses to new development should be minimal. Changes in land use may also amplify the impacts of heavy rains and storms, as additional impervious surfaces can cause additional runoff and localized flooding throughout the City.

Severe Weather: High Winds and Tornado

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile

High winds, as defined by the NWS glossary, are sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration. High winds can cause significant property damage, threaten public safety, and have adverse economic impacts from business closures and power loss. High winds, when combined with high temperatures and low humidity can also lead to PSPS events, while rare in Sacramento County and the City. Winds can also drive fires in and near the City.

Tornadoes are rotating columns of air marked by a funnel-shaped downward extension of a cumulonimbus cloud whirling at destructive speeds of up to 300 mph, usually accompanying a thunderstorm. Tornadoes form when cool, dry air sits on top of warm, moist air. Tornadoes are the most powerful storms that exist. Tornadoes, though rare, can affect areas of the City, primarily during the rainy season in the late fall, winter, and early spring.

Location and Extent

The entire City is subject to significant, non-tornadic (straight-line), winds. Each area of the City is at risk to high winds. Magnitude of winds is measured often in speed and damages. These events are often part of a heavy rain and storm event but can occur outside of storms. The speed of onset of winds can be short, but accurate weather prediction mechanisms often let the public know of upcoming events. Duration of winds in California is often short, ranging from minutes to hours. The Beaufort scale is an empirical 12 category scale that relates wind speed to observed conditions at sea or on land. Its full name is the Beaufort Wind Force Scale. The Beaufort Scale was shown in Section 4.3.5 of the Base Plan.

Tornadoes, while rare, can occur at any location in the City. Prior to February 1, 2007, tornado intensity was measured by the Fujita (F) scale. This scale was revised and is now the Enhanced Fujita scale. Both scales are sets of wind estimates (not measurements) based on damage. The new scale (EF) provides more damage indicators (28) and associated degrees of damage, allowing for more detailed analysis and better correlation between damage and wind speed. It is also more precise because it considers the materials affected and the construction of structures damaged by a tornado. The F Scale and EF Scale are shown in Section 4.3.5 of the Base Plan.

Past Occurrences

Disaster Declarations

There have been no federal or state disaster declarations in the County for winds and tornadoes.

NCDC Events

The NCDC data recorded 109 high wind, 7 funnel clouds, and 15 tornado incidents for Sacramento County since 1950. Many of these wind events likely affected the City.

City of Citrus Heights Past Occurrences

No tornadoes have occurred in Citrus Heights. Damage to private property and public trees and roadways have resulted from winds and is described in the Flood: Localized Stormwater Flooding section above.

Climate Change and High Winds and Tornado

According to the 2024 CAS, while average annual rainfall may increase or decrease slightly, the intensity of individual thunderstorm events is likely to increase during the 21st century. This may bring stronger thunderstorm winds. The CAS does not discuss non-thunderstorm winds or tornadoes.

Vulnerability to Severe Weather: High Wind and Tornadoes

The City is subject to potentially destructive high winds and tornadoes. High winds are common throughout the area and can happen during most times of the entire year and outside of a severe storm event. Tornadoes are rare. High winds and tornadoes can be a significant public safety and economic concern. The whole of the City is at some measure of vulnerability to wind and tornadoes.

An assessment of a community's vulnerability to high winds begins with an understanding of local exposure to wind and tornadoes. This is included in the Local Concerns section below followed by a discussion of the City's Assets at Risk to this hazard.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

Local concerns from winds and tornadoes is minimal. There have been no known tornado events in the area. The concerns from high wind events include tree and limb damage, public property damage, and public infrastructure damage.

Assets at Risk

Assets at risk from winds and tornadoes include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations are at some vulnerability to high winds and tornadoes. Certain vulnerable populations are at the greatest risk to the effects of high winds and tornadoes. These include:

- The unsheltered.
- Citizens who reside in mobile homes.
- Citizens in buildings with no tornado shelter or below ground floors.
- The medically fragile experiencing power outages as a result of wind events.
- Those working or caught outdoors during a wind or tornado event.

Structures

All structures in the City have some measure of risk from high wind and tornadoes. Though rare, a tornado could cause damage to virtually all facilities in the tornado touchdown path. This would affect homes, businesses, commercial property, as well as government and critical facilities. During a wind or tornado event, power lines in the City can be damaged by falling trees caused by wind. Power outages can occur during high wind events. High winds can contribute to PSPS events being declared. High winds and tornadoes could cause sparks from electric wires and other sources, which could lead to wildfire ignition. Once ignited, high winds can also cause wildfires to rapidly spread and become out of control. High wind conditions can cause wildfires to move into more urban areas destroying structures and whole subdivisions, as seen in recent wildfire events in the West.

Critical Facilities and Infrastructure

Though most critical facilities are built to withstand winds, high wind speeds can still cause damage to critical facilities and infrastructure in the City. Though rare, a tornado could cause damage to virtually all

facilities in the tornado touchdown path. Winds can cause power outages affecting system operations. Winds can lead to out of control wildfires, which can damage critical facilities and impact their abilities to perform their critical roles in the community.

Natural, Historic, and Cultural Resources

Natural resources, such as trees, are vulnerable to winds. Increased levee and streambank erosion can occur during periods of high water and high winds. High wave action during significant wind events can impact marsh lands and habitat areas. Soil erosion can also occur during high winds. Most all natural, historic, or cultural resources are at risk to tornadoes. Tornadoes can tear apart habitats, causing fragmentation across ecosystems and can damage and destroy historic structures and cultural resources.

Impacts from Severe Weather: High Wind and Tornado

Wind and tornadoes can cause damage to property and loss of life. While most tornado damage is caused by violent winds, the majority of injuries and deaths generally result from flying debris. Property damage can include damage to buildings, fallen trees, and power lines. Local industries may also be damaged or destroyed. Access roads and streets may be blocked by debris, delaying necessary emergency response. Winds can push automobiles off roads, damage roofs and structures, cause power outages, and cause secondary damage due to flying debris and hazardous trees. High winds can also contribute to the spread and intensity of wildfires. High winds during periods of high water can cause impacts to levees and streambanks from accelerated erosion. Climate change may affect this hazard and cause winds to increase in velocity and more tornadoes to affect the City.

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile section above), changes in population patterns, and changes in land use and development. The influencing effects of these factors on this hazard are discussed further in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City include the following:

- Climate change is likely to exacerbate future wind conditions and associated impacts and vulnerability of the City. Climate change is not likely to affect future tornado conditions. This was discussed in greater detail in the Climate Change and Winds and Tornadoes section of the Hazard Profile above.
- Future population growth should be considered as having more or less people in a community affects the overall hazard vulnerability to the City. The City is expected to see slow and steady growth. The City has 36 areas where future development is expected to occur in the next five years. Vulnerable

populations could experience disproportional effects from this hazard and should be planned for as development of the City continues. Changes in population and population patterns may or may not increase the impacts and vulnerability of the City to this hazard depending on the location and nature of growth, the location, nature and extent of future high wind and tornado events, and continued planning for future hazard conditions.

- Land use planning should be proactive to address future hazard conditions. The City has 36 areas where future development is expected to occur in the next five years. Building codes in the City ensure that new development is built to current building standards to withstand high winds, which should reduce the risk to future development in the City from high winds and tornadoes. With adherence to development standards, future losses to new development should be minimal. Changes in land use and increased development may amplify the impacts of high winds and tornadoes, as additional structures in the City increase the number of buildings at risk to high winds and tornadoes; however, given the limited development planned in the next five years, any increase in vulnerability of the City should be limited.

Future Development

Future development considerations should be ongoing and proactive. Ensuring that comprehensive land use planning is conducted, regulatory requirements, such as building codes, are followed, and varying needs for different demographic groups with intersecting identities that reside within the City are considered can help make for a more resilient community. The City enforces the state building codes which includes standards for new development to minimize damage from windstorms. New and existing critical facilities and infrastructure should also consider adding backup power systems to limit impacts associated with power outages.

Wildfire (with smoke and air quality)

Likelihood of Future Occurrence–Likely

Vulnerability–High

Hazard Profile

Wildland fire and the risk of a conflagration is an ongoing concern for the City of Citrus Heights. Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of fire regimes. Wildland fires affect grass, forest, and brushlands, as well as structures. Where there is human access to wildland areas the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Historically, the fire season extends from early spring through late fall of each year during the hotter, dryer months; however, in recent years, the risk of wildfire has become a year around concern.

Fire conditions arise from a combination of high temperatures, low moisture content in the air and fuel, accumulation of vegetation, and high winds. These weather conditions can result in red flag (e.g., fire weather) days, and, while rare, may result in PSPS events in the City. While wildfire risk has predominantly been associated with more remote forested areas and wildland urban interface (WUI) areas, significant wildfires can also occur in more populated, urbanized areas. There is also the concern of wildfires occurring

in these more remote, forested areas that under certain weather conditions, can extend into areas not generally considered at a high risk to wildfire. Smoke and air quality also become an issue, both from fires occurring inside and outside of the Sacramento County Planning Area and the City.

Wildfire Smoke and Air Quality

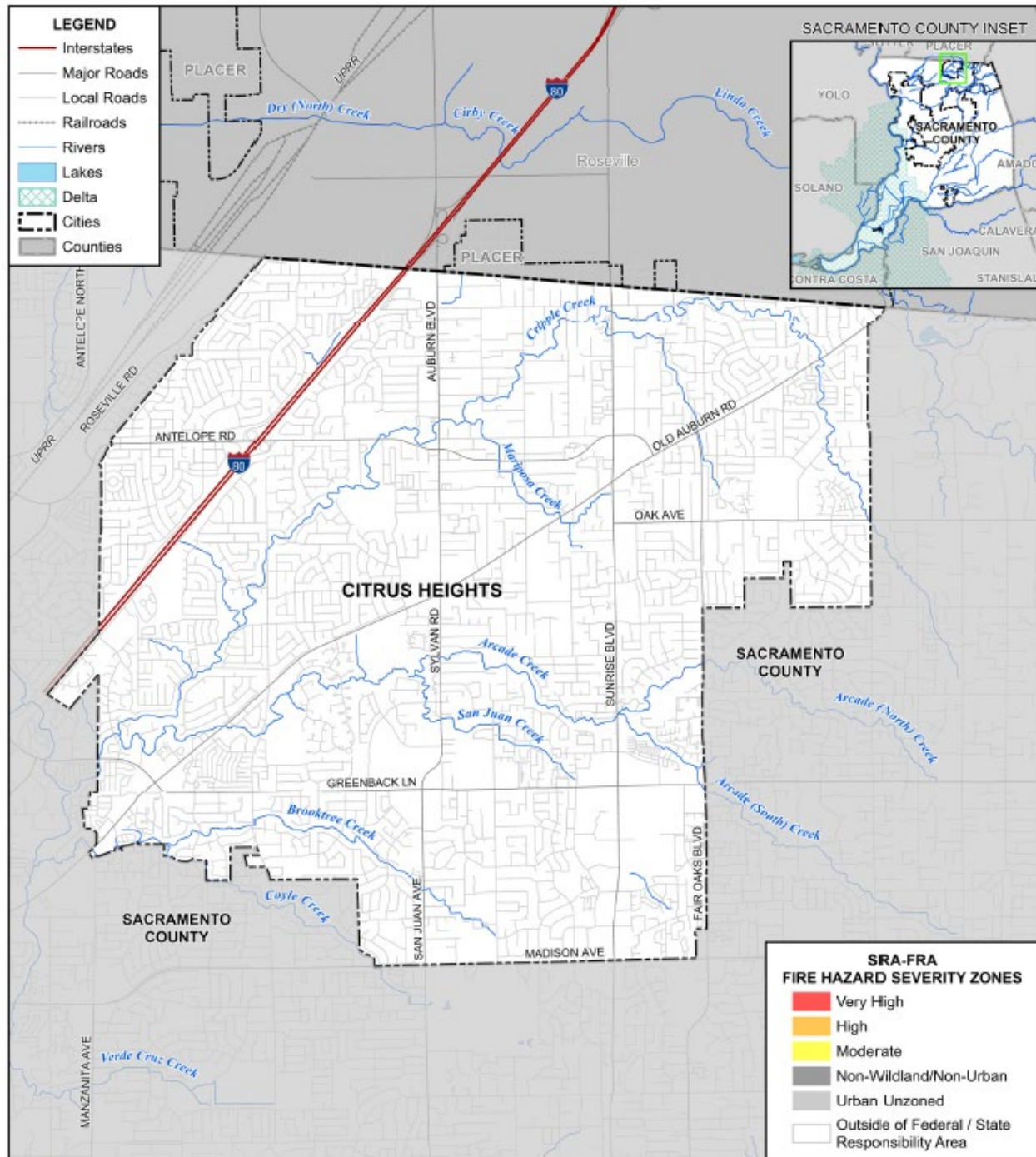
Smoke from wildfires is made up of gas and particulate matter, which can be easily observed in the air. Air quality standards have been established to protect human health with the pollutant referred to as PM_{2.5} which consists of particles 2.5 microns or less in diameter. These smaller sizes of particles are responsible for adverse health effects because of their ability to reach the lower regions of the respiratory tract.

Wildfire smoke can have negative effects to those who live in or near a fire burn area. Smoke and air pollution from wildfires can be a severe health hazard. Significant wildfires occurring in both Sacramento County and nearby northern California communities since the 2021 LHMP Update have created significant air pollution affecting area residents. These were discussed in Section 4.3.17 of the Base Plan.

Location and Extent

Wildfire can affect all areas of the City. CAL FIRE has estimated that the risk varies across the City and has created updated wildfire maps showing risk variance across the City and the Sacramento County Planning Area. Following the methodology described in Section 4.3.15 of the Base Plan, wildfire maps for the City of Citrus Heights were created. Figure A-23 shows the CAL FIRE State Responsibility Areas (SRA) and Federal Responsibility Areas (FRA) and their associated Fire Hazard Severity Zones (FHSZ) in the City. Figure A-24 shows the CAL FIRE Local Responsibility Areas (LRA) and their associated Fire Hazard Severity Zones (FHSZ) in the City. As shown on the maps, SRA/FRA FHSZs within the City fall outside of the state and federal mapped areas; all LRA FHSZs in the City are classified as Non-Wildland.

Figure A-20 City of Citrus Heights – CAL FIRE SRA/FRA Fire Hazard Severity Zones



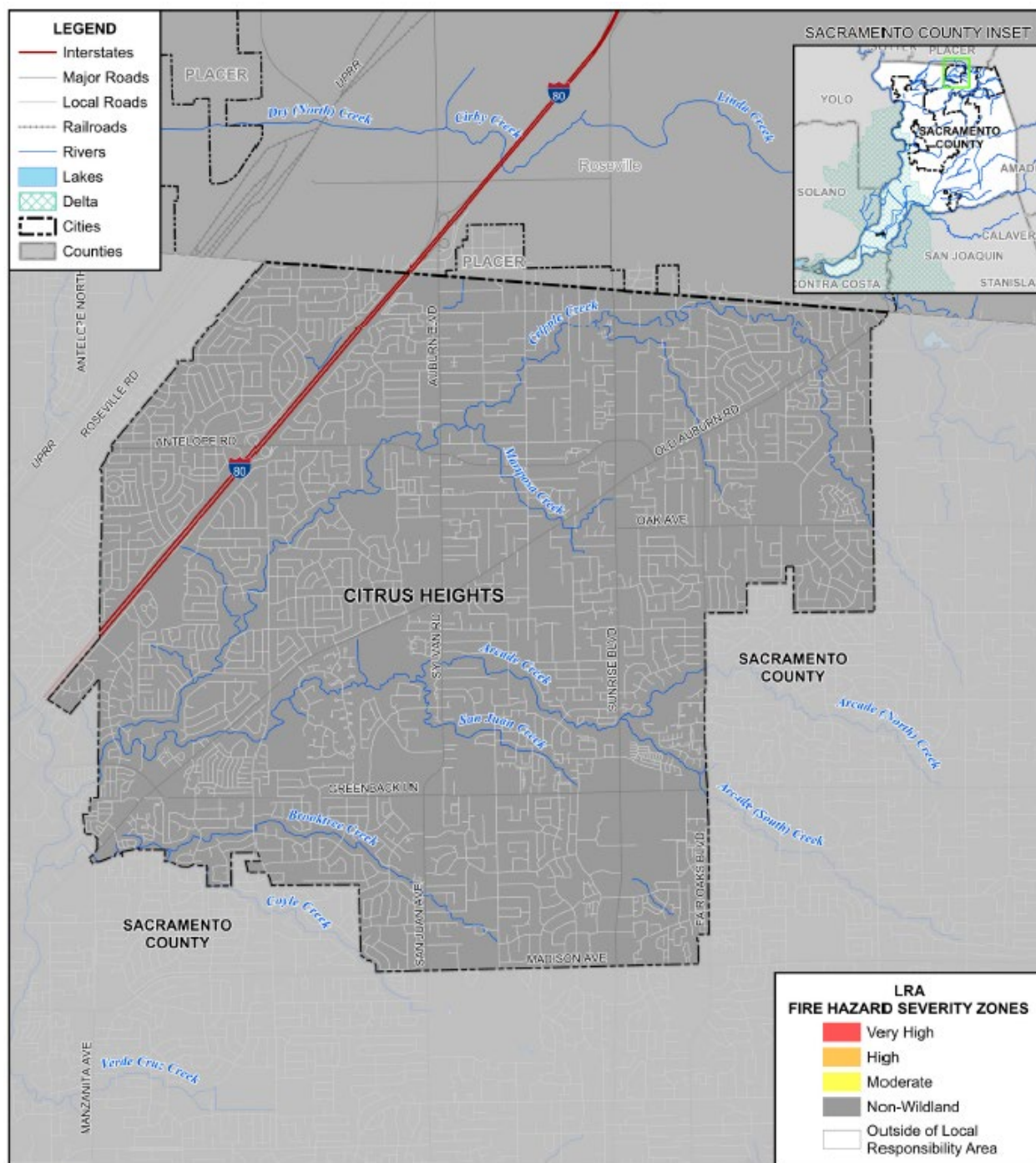
FOSTER MORRISON
CONSULTING

0 1 2 Miles

SACRAMENTO
COUNTY

Data Source: CAL FIRE (State Responsibility Area: FHSZSRA_23_3) April 2024,
CAL FIRE (Federal Responsibility Area: Draft c20fhszl06_1), September 2007,
Sacramento County, Cal-Atlas; Map Date: 9/28/2026.

Figure A-21 City of Citrus Heights – CAL FIRE LRA Fire Hazard Severity Zones



FOSTER MORRISON
CONSULTING

0 1 2 Miles

SACRAMENTO
COUNTY

Data Source: CAL FIRE (Local Responsibility Area FHSZ 3/2025 FHSZLRA25_v1_All),
Sacramento County, Cal-Atlas; Map Date: 9/28/2026.

Wildfires tend to be measured in structure damages, injuries, and loss of life as well as acres burned. Fires can have a quick speed of onset, especially during periods of drought or during hot dry summer months.

Fires can burn for a short period of time or may have durations lasting for a week or more. Geographical FHSZ extents in the SRA/FRA are shown in Table A-37, while extents in the LRA are shown on Table A-38. As shown, the City sits outside of the SRA/FRA and fully inside the LRA. In the LRA, the only FHSZ is the Non-Wildland zone.

Table A-32 City of Citrus Heights – CAL FIRE SRA/FRA Fire Hazard Severity Zone Geographical Extents

Fire Hazard Severity Zone	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Very High	0	0%	0	0%	0	0%
High	0	0%	0	0%	0	0%
Moderate	0	0%	0	0%	0	0%
Non-Wildland/Non-Urban	0	0%	0	0%	0	0%
Urban Unzoned	0	0%	0	0%	0	0%
Outside of Federal / State Responsibility Area	7,646	100%	6,466	100%	1,180	100%
Total	7,646	100%	6,466	100%	1,180	100%

Source: CAL FIRE

Table A-33 City of Citrus Heights – CAL FIRE LRA Fire Hazard Severity Zone Geographical Extents

Fire Hazard Severity Zone	Total Acres	% of Total Acres	Improved Acres	% of Total Improved Acres	Unimproved Acres	% of Total Unimproved Acres
Very High	0	0%	0	0%	0	0%
High	0	0%	0	0%	0	0%
Moderate	0	0%	0	0%	0	0%
Non-Wildland	7,646	99.98%	6,466	99.98%	1,180	99.96%
Outside of Local Responsibility Area	2	0.02%	1	0.02%	0.5	0.04%
Total	7,647	100%	6,467	100%	1,180	100%

Source: CAL FIRE

Past Occurrences

Disaster Declaration History

There has been four state and three federal disaster declarations due to fire, as shown in Table A-39.

Table A-34 Sacramento County – State and Federal Wildfire Disaster Declarations 1950-2025

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Fire	4	1973, 2020 (twice), 2024	3	2020 (twice), 2025

Source: Cal OES, FEMA

NCDC Events

The NCDC has tracked 15 wildfire events in the County dating back to 1993.

City of Citrus Heights Events

There have been no direct City wildfire incidents since the 2021 LHMP. Northern California Counties (El Dorado, Placer, Plumas, Lassen, Shasta and Butte) are heavily forested and subject to wildfires that may impact Citrus Heights from smoke and air pollution causing unsafe air quality during prolonged wildfire events, as they have in the past.

Climate Change and Wildfire

It is likely that climate change will increase the chance of future occurrence as well as future impacts from wildfire. More information on future impacts to the City can be found in the Future Conditions/Future Development section of the Vulnerability Assessment below.

Warmer temperatures can exacerbate drought conditions. Drought often kills plants and trees, which serve as fuel for wildfires. Warmer temperatures could increase the number of wildfires and pest outbreaks, such as the western pine beetle. Cal-Adapt’s wildfire tool predicts the potential increase in the amount of burned areas for the year 2090-2099, as compared to recent (2010) conditions. This is shown in Section 4.3.17 of the Base Plan. Based on this model, Cal-Adapt predicts that wildfire risk in Sacramento County will increase moderately at the end of the century. However, wildfire models can vary depending on the parameters used. Cal-Adapt does not take landscape and fuel sources into account in their model. In all likelihood, in the Sacramento County Planning Area, precipitation patterns, high levels of heat, topography, and fuel load will determine the frequency and intensity of future wildfires.

The 2024 CAP noted issues with climate change and wildfire. Historically, attention to wildfire in California has mostly focused on the Sierra Nevada region and Southern California, but recent large and destructive wildfires in other portions of the state have rapidly shifted attention to the ongoing risks statewide. Climate change is exacerbating many of the factors that contribute to wildfire risk. Increased variability in precipitation may lead to wetter winters and increased vegetative growth in the spring. Potentially longer and hotter summer periods will lead to the drying of vegetative growth, which may ultimately result in a greater amount of fuel for wildfire ignition and spread.

The 2026 American, Bear, and Cosumnes Watersheds Resilience Plan noted that a key driver of climate vulnerability, adaptive capacity, and implementation readiness in the watershed group is wildfire. An equity analysis was performed as part of this Plan. An Equity Analysis Technical Appendix demonstrates how social vulnerability aligns with the physical hazard environment across the watershed. It noted that

wildfire exposure grows sharply under mid-century climate conditions, with the population exposed to high burn probability increasing from 14% today to 34% in the future, and the number of people in the highest sensitivity category increasing five-fold.

Vulnerability to Wildfire

Risk and vulnerability to the City from wildfire, and the potential for a conflagration, is of significant concern. Wildfires in the City, can occur from a variety of both natural and manmade causes. The City can be affected both by fires that start on or near City lands as well as those that start elsewhere and move into the City. In addition to burning large areas of land, air quality can be affected in the City by smoke from fires occurring inside the City as well as those from many miles away. As growth continues and populations increase in the City, the potential for wildfires will also increase.

The whole of the City is at some measure of vulnerability to wildfire. An assessment of a community's vulnerability to wildfire begins with an understanding of local exposure to wildfire. This is included in the Local Concerns section below. After that section, assets at risk are discussed.

Local Concerns

The City has specific concerns and unique vulnerabilities regarding this hazard. These concerns form a portion of the basis for the mitigation strategy and mitigation actions that seek to reduce risk and vulnerability to this hazard.

The air pollution from area/regional wildfires creates potential health risk to the Citrus Heights community, particularly to older and other vulnerable populations. Area schools, regional events (California International Marathon) and local sporting events are occasionally cancelled or reduced due to impacts from air pollution associated with wildfires.

The City relies on Air quality data from the Sacramento Air Quality Management District. It provides a California Smoke Blog associated with each wildfire.

While Citrus Heights does not include any areas specified for wildfire risk mapping, within the City there are numerous open spaces and woodland areas that are at-risk of brushfires/wildfires that could quickly spread to directly adjacent properties and pose a significant risk to loss of life and structures. As recently seen in other more urban areas of the West, the risk of conflagration is an increasing concern in the City, with structures adding to the fuel source feeding and spreading wildfires.

Assets at Risk

Assets at risk from wildfire include people and populations; structures; critical facilities and infrastructure; and natural, historic, and cultural resources. These are discussed in the following sections.

People and Populations

All populations are vulnerable to wildfire. Certain vulnerable populations are at greater risk to the effects of wildfire as well as smoke and air quality issues that wildfires bring. Vulnerable populations include:

- Unhoused
- Infants and children under age five and their caregivers
- Senior (65 and older)
- Individuals with disabilities
- Individuals' dependent on medical equipment
- Individuals who exercise, recreate, or work outdoors
- Individuals with impaired mobility

To further evaluate the impact to the residential populations within the City, the CAL FIRE FHSZ dataset was overlayed on the parcel layer. Those residential parcels that intersect the FHSZs were counted and multiplied by the 2023 Census Bureau average household factors for the City of Citrus Heights – 2.56. According to this analysis, there is a total population of 0 residents of the City of Citrus Heights falling within the moderate or higher SRA/FRA as well as the LRA FHSZs. This is shown in Table A-40 and Table A-41, respectively.

Table A-35 City of Citrus Heights – Improved Residential Parcels and Population by CAL FIRE SRA/FRA Fire Hazard Severity Zone

Jurisdiction	Very High		High		Moderate	
	Improved Residential Parcels	Population at Risk	Improved Residential Parcels	Population at Risk	Improved Residential Parcels	Population at Risk
Citrus Heights	0	0	0	0	0	0

Source: CAL FIRE, 2025 Sacramento County Parcel/Assessor Data, 2020 US Census Bureau Average Household Size – City of Citrus Heights (2.56)

Table A-36 City of Citrus Heights – Improved Residential Parcels and Population by CAL FIRE LRA Fire Hazard Severity Zone

Jurisdiction	Very High		High		Moderate	
	Improved Residential Parcels	Population at Risk	Improved Residential Parcels	Population at Risk	Improved Residential Parcels	Population at Risk
Citrus Heights	0	0	0	0	0	0

Source: CAL FIRE, 2025 Sacramento County Parcel/Assessor Data, 2020 US Census Bureau Average Household Size – City of Citrus Heights (2.56)

The City noted that the Critical Facilities and Infrastructure section below includes the facilities used by At-Risk populations that are threatened by this hazard. While this is not specific to what special populations reside in the City, it does speak to facilities that are used to serve (portions) of this population.

Structures

Large wildfire events can affect the built environment of the City. All structures have some risk to wildfire. GIS was used to determine the possible impacts of wildfire within the City of Citrus Heights. The methodology described in Section 4.3.15 of the Base Plan was followed in determining structures and values at risk in both the CAL FIRE's SRA/FRA and LRA Fire Hazard Severity Zone layers. Only LRA

fire hazard severity zones intersect the City; as such no SRA/FRA analysis is presented here. Analysis results for the LRA in the City of Citrus Heights are shown in Table A-42, which summarizes total parcel counts, improved parcel counts and their structure values by FHSZs. As shown, no moderate or higher FHSZs exist in the City.

Table A-37 City of Citrus Heights – Count and Value of Parcels and Structures by CAL FIRE LRA Fire Hazard Severity Zone

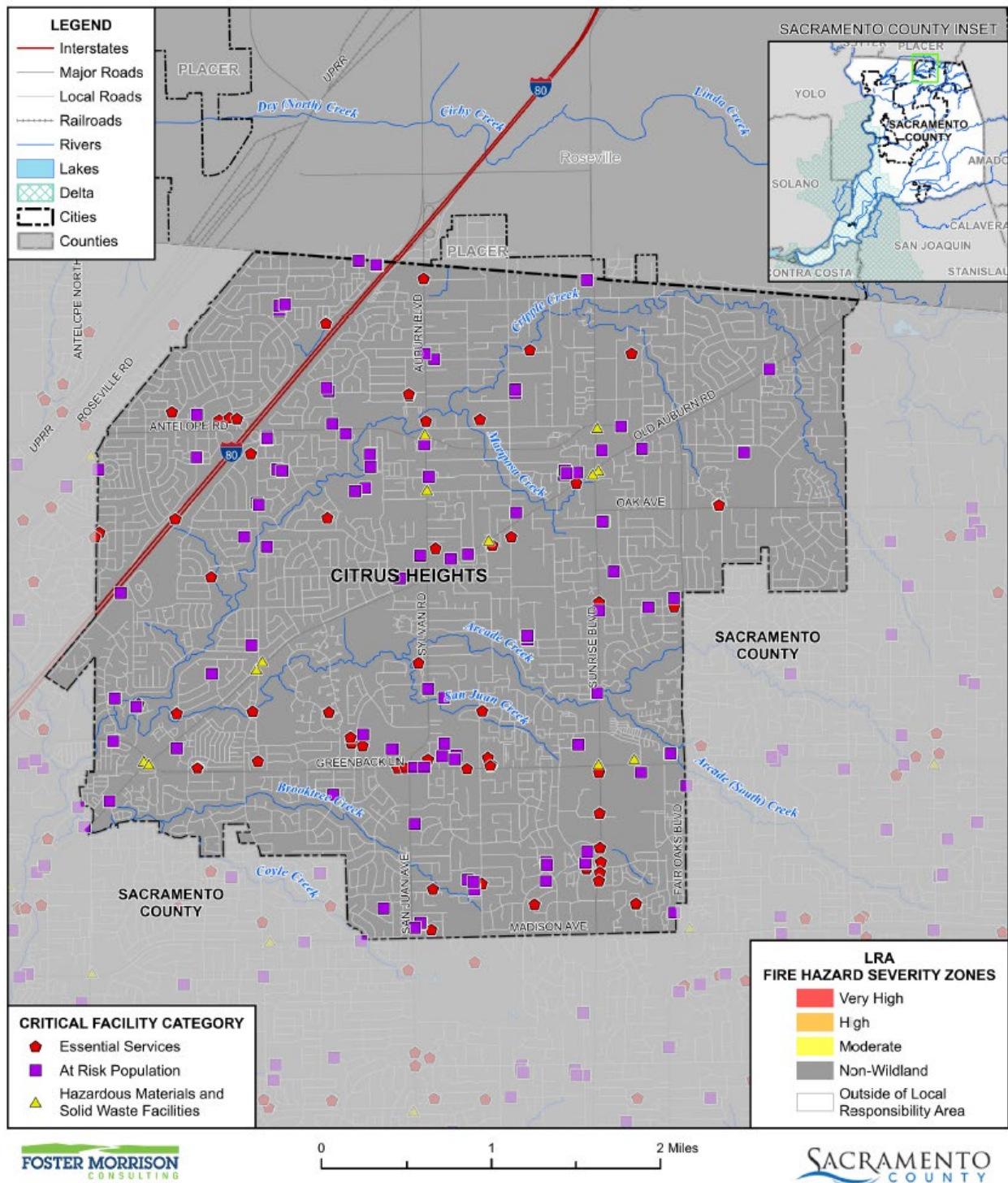
Fire Hazard Severity Zone	Total Parcel Count	Improved Parcel Count	Total Land Value	Structure Value	Estimated Contents Value	Total Value
High	0	0	\$0	\$0	\$0	\$0
Moderate	0	0	\$0	\$0	\$0	\$0
Non-Wildland	25,949	24,885	\$3,188,797,972	\$10,609,996,768	\$5,763,037,652	\$19,561,832,392
Outside of Local Responsibility Area	0	0	\$0	\$0	\$0	\$40
Citrus Heights Total	25,949	24,885	\$3,188,797,972	\$10,609,996,768	\$5,763,037,652	\$19,561,832,392

Source: CAL FIRE, Sacramento County 2025 Parcel/Assessor Data

Critical Facilities and Infrastructure

Wildfire presents a threat to critical facilities and infrastructure. Critical facilities and infrastructure play an immensely important role in communities. Damage to any one of these systems can threaten public safety, wreak havoc on daily life, impact properties far from the wildfire, and result in economic impacts to the City.. A separate analysis was performed on the critical facility inventory in the City to determine which critical facilities fall into each fire hazard severity zone. Using GIS, the SRA/FRA and LRA fire hazard severity zone layers were overlayed on the critical facility GIS layer. Only LRA fire hazard severity zones intersect the City; as such no SRA/FRA analysis is presented here. This is shown on Figure A-25 for the LRA fire hazard severity zones. Table A-43 details which critical facilities fall in which LRA fire hazard severity zone. All fall into the Non-Wildland FHSZ.

Figure A-22 City of Citrus Heights – Critical Facilities in LRA Fire Hazard Severity Zones



Data Source: CAL FIRE (Local Responsibility Area FHSZ 3/2025 FHSZLRA25_v1_All), Sacramento County, Cal-Atlas; Map Date: 4/17/2026.

Table A-38 City of Citrus Heights – Critical Facilities by Category and Type in LRA Fire Hazard Severity Zones

Fire Hazard Severity Zones	Critical Facility Category / Type	Facility Count
Non-Wildland	<i>Essential Services Facilities</i>	
	Emergency Evacuation Center	8
	EMS Stations	4
	FDIC Insured Banks	13
	Fire Station	5
	Law Enforcement	2
	Microwave Service Towers	17
	Water Well	27
	<i>Essential Services Facilities Total</i>	<i>76</i>
	<i>At Risk Population Facilities</i>	
	Colleges, Universities, and Professional Schools	3
	Day Care Center	27
	Mobile Home Parks	10
	Places of Worship	37
	School	31
	<i>At Risk Population Facilities Total</i>	<i>108</i>
	<i>Hazardous Materials and Solid Waste Facilities</i>	
	Leaky Underground Storage Tank	12
	<i>Hazardous Materials and Solid Waste Facilities Total</i>	<i>12</i>
	Total	196

Source: CGS, City of Citrus Heights

Natural, Historic, and Cultural Resources

Natural, historic, and cultural resources located within areas at risk to wildfire would be vulnerable. Should a wildfire occur in the City, the impacts to natural, historic and cultural resources could be extensive and include air pollution, contamination from water runoff containing toxic products, and other environmental discharges or releases from burned materials affecting soils, habitat areas, wildlife, and aquatic resources. Historic and cultural resources can be damaged or destroyed and are often more vulnerable due to their older age, construction type, and lack of fire prevention infrastructure such as sprinklers.

Impacts from Wildfire

Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and timber; and loss of recreational opportunities. Out of control wildfires can have catastrophic impacts. Wildfires can cause short-term and long-term

disruption to the City. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the City by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the City; smoke and air pollution from wildfires can be a severe health hazard. Smoke impacts may come from wildfires outside the City, as well as from within.

Although the physical damages and casualties arising from wildland-urban interface or conflagration fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

The impacts of a fire are felt long after the fire is extinguished. In addition to the loss of property in fires, the loss in vegetation and changes in surface soils alters the environment. When supporting vegetation is burned, hillsides become destabilized and prone to erosion. The burnt surface soils are harder and absorb less water. When winter rains come, this leads to increased runoff, erosion, and landslides in hilly areas.

Impacts that are not quantified, but can be anticipated in large future events, include:

- Injury and loss of life;
- Commercial and residential structural and property damage;
- Disruption of and damage to public infrastructure, utilities, and services;
- Damage to roads/bridges resulting in loss of mobility;
- Significant economic impact (jobs, sales, tax revenue) to the community; and
- Negative impact on commercial and residential property values

Impacts to identified assets at risk to this hazard and the overall vulnerability of the City may be affected in the future by climate change (which was discussed in the hazard profile above), changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. These are discussed in the Future Conditions/Future Development discussion below.

Future Conditions/Future Development

This section provides a discussion of how future conditions will influence or affect the hazard over time and also discusses future development relative to each hazard.

Future Conditions

Future conditions may be affected by climate change, changes in population patterns (migration, density, or the makeup of socially vulnerable populations), and changes in land use and development. Findings on this for the City of Citrus Heights include the following:

- Climate change is likely to exacerbate future wildfire conditions and associated impacts and vulnerability of the City to wildfire. This was discussed in greater detail in the Climate Change and Wildfire section of the Hazard Profile above.
- The City is expected to see slow and steady growth. The City has 36 areas where growth is expected over the next five years. Additional population growth would likely bring continued diversity to the City. Vulnerable population groups could face disproportionate effects from wildfire and should be planned for. Changes in population and population patterns may or may not increase the impacts and vulnerability of the City to wildfire depending on the location and nature of growth and continued planning for future hazard conditions and the location, magnitude, and severity of future wildfire events. However, wildfire smoke and air quality from regional events will likely continue to contribute to an increase in vulnerability to City populations.
- Land use planning should be proactive to address future hazard conditions. New development, adding new structures and critical facilities, and infrastructure in the City may increase the vulnerability of the City to this hazard and put additional development at risk. The City has 36 areas where growth is expected over the next five years. These are located in the Non-Wildland FHSZ which limits risk. Additionally, City building codes are in effect to reduce this risk and should be updated as necessary to continue to address future wildfire conditions. Specifically, with the release of the new 2025 LRA mapping for Sacramento County, wildfire building codes should be evaluated and updated as required to include enhanced measures to reduce wildfire impacts on new construction, and including the formal adoption of the new LRA maps. Changes in land use and future development is unlikely to increase the impacts and vulnerability of the City to this hazard with the whole of the City mapped in a Non-Wildland FHSZ.

Future Development

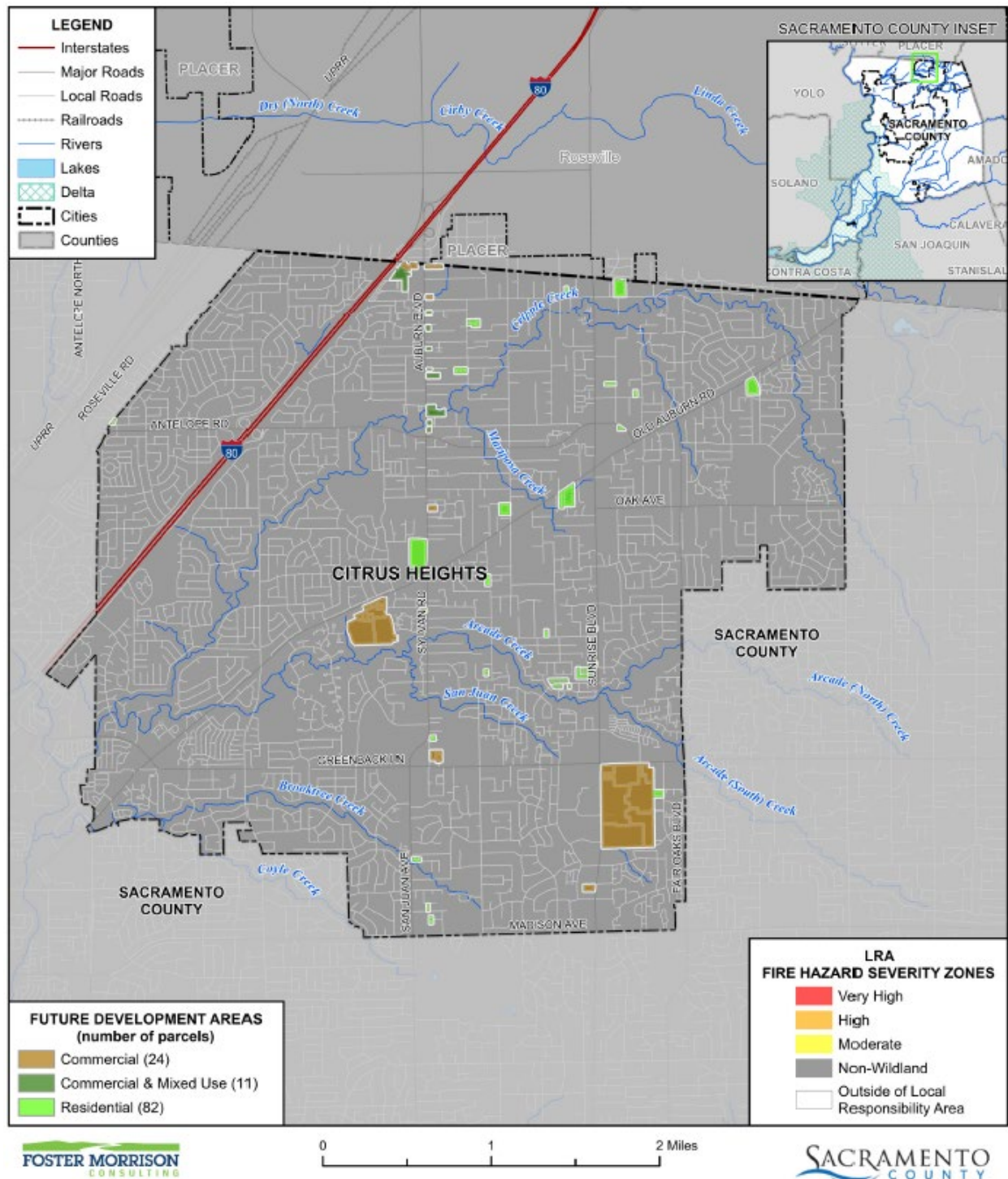
Additional growth and development within moderate or higher fire hazard severity zones in the City would normally place additional values at risk to wildfire. However, none of those FHSZs exist in the City. City building codes are in effect and should continue to be updated as appropriate to reduce future impacts.

Future development areas and their vulnerability to wildfire are discussed further in the below GIS analysis.

GIS Analysis

The City provided 36 future development areas which were used as the basis for the inventory of future development for the City. These areas were mapped in GIS. Utilizing the future development area spatial layer, the parcel polygon data was intersected to determine the future development areas within each LRA fire hazard severity zone. The City has no mapped SRA/FRA fire hazard severity zones; as such, no maps or tabular analysis is presented for the SRA/FRA. Figure A-26 shows the locations of the future development area overlayed on the LRA fire hazard severity zones. As shown in Figure A-26, the future development areas fall within areas of Non-Wildland FHSZ. As such, no tabular analysis is presented.

Figure A-23 City of Citrus Heights – Future Development Areas in LRA Fire Hazard Severity Zones



A.5 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capability assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

A.5.1. Regulatory Mitigation Capabilities

Table A-44 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the City of Citrus Heights.

Table A-39 City of Citrus Heights's Regulatory Mitigation Capabilities

Plans	In Place Y/N	Does the plan address hazards? Can the plan be used to carry out mitigation actions? When was it last updated??
Capital Improvements Plan (CIP)	Y	The CIP is updated every 2 years and forecasts for a 5-year period. Projects include prevention of flooding and repair of flooding damage as identified in City Drainage Master Plans.
Climate Change Adaptation Plan	N	The City of Citrus Heights General Plan and the Greenhouse Gas Reduction Plan together inform the City's Climate adaptation and mitigation framework. Climate Change was addressed in the 2020 General Plan update. The general plan sets policies to minimize impacts to the City from local hazards such as flooding, air pollution, climate change, greenhouse gas reduction.
Community Wildfire Protection Plan (CWPP)	Y	A separate County Agency, Sacramento Metropolitan Fire District, covers the City of Citrus Heights CWPP. This is a collaborative plan focusing on reducing hazardous fuels, implementing defensible space around homes and providing public education to mitigate potential impacts and emergency evacuation/resources information.
Comprehensive/Master Plan	Y	2020 General Plan
Continuity of Operations Plan	N	Formal Continuity Operation Plan to be developed
Economic Development Plan	Y	2025-2027 However, this plan does not specifically address natural hazards.
Land Use Plan	Y	Zoning Code
Local Emergency Operations Plan	Y	The City Emergency Operations Approach includes an Emergency Information Guide with steps for residents to prepare for disasters, Evacuation Routes, Emergency Alert System and coordination with Sacramento Metropolitan Fire District for fire and emergency medical services

Stormwater Management Plan	Y	2016 Citywide Storm Drain Master Planning has been split into phases by neighborhood. Plans for 5 of the 11 neighborhoods have been completed and the remaining 6 are planned for the future. The plan is used to reduce 100-year and localized flooding that could result in damage or loss of life and property.
Transportation Plan	Y	The City General Plan updated in August 2020 includes a section on Corridors and a section on Transportation and Mobility. The City also has an evacuation plan updated in 2024. It provides routes for the 11 neighborhoods.
Other		
Land Use Planning and Ordinances		Is the ordinance an effective way to reduce hazard impacts? Is the ordinance adequately administered and enforced?
Acquisition of land for open space and public recreation use	N	Although not a formal policy, the City has a history of accepting donated undevelopable land to preserve the natural floodplain functions. Reduces hazards by allowing public acquisition of floodplain or other designated open/natural spaces to maintain floodplain natural benefits and public recreation uses.
Building code	Y	Version/Year: 2025 CBC (including amendments). This ordinance/policy is adequately administered and enforced.
Flood insurance rate maps	Y	2/22/2024 FIRM maps have been adopted and integrated into Chapter 42 – Floods of the City’s Municipal Code. This ordinance/policy is adequately administered and enforced.
Floodplain ordinance	Y	Chapter 42 – Floods of the City’s Municipal Code. This ordinance/policy is adequately administered and enforced.
Natural hazard-specific ordinance (stormwater, steep slope, wildfire)	N	No specific Natural Hazard Ordinance. However, Chapter 42-Floods (special flood hazard areas, erosion, and building restrictions), Chapter 98 – Stormwater Discharge (water quality, illicit connections and discharges), and Zoning Code 106.30.040 – Creekside Development and Flood Hazard Mitigation (development restrictions near creeks, but not in SFHA). Chapter 38 – Fire Prevention and Protection (wildfire prevention). These ordinances are adequately administered and enforced.
Subdivision ordinance	Y	Chapter 82 – Subdivisions and Land Development. This ordinance is adequately administered and enforced.
Zoning ordinance	Y	Chapter 106 – Zoning Code. This ordinance is adequately administered and enforced.

Other	N
How can these capabilities be expanded and improved to reduce risk?	
Future planning mechanisms will seek to take natural hazards into account, thus expanding the mitigation of hazards in seeking to reduce risk to citizens. City is working to complete a Climate Adaptation Plan, which would inform additional policies/codes to be amended into the City's General Plan and Municipal Code. Potential modifications to the City's Flood Ordinance could reduce risk of flooding impacts and increase the City's Class above Class 7 in FEMA Community Rating System (CRS).	

Source: City of Citrus Heights

A.5.2. Administrative/Technical Mitigation Capabilities

Table A-45 identifies the City department(s) responsible for activities related to mitigation and loss prevention in the City of Citrus Heights.

Table A-40 City of Citrus Heights's Administrative and Technical Mitigation Capabilities

Administration	In Place Y/N	Describe capability Is coordination effective?
Staff		Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	Y	CBO is adequate, trained, enforces regulations, hazard mitigation strategies, and coordinates with other Departments/Agencies as necessary.
Civil Engineer, including dam and levee safety	Y	Staff is adequate, trained, enforces regulations, hazard mitigation strategies, and coordinates with other Departments/Agencies as necessary.
Community Planner	Y	Staff is adequate, trained, enforces regulations, hazard mitigation strategies, and coordinates with other Departments/Agencies as necessary.
Emergency Manager	Y	Staff is adequate, trained, enforces regulations, hazard mitigation strategies, and coordinates with other Departments/Agencies as necessary.
Floodplain Administrator	Y	City Engineer is trained, enforces regulations, hazard mitigation strategies, and coordinates with other Departments/Agencies as necessary.
GIS Coordinator	N	No designated staff to GIS management. Staff from various departments are trained in utilizing the software and coordinates with other Departments/Agencies as necessary.
Planning Commission	Y	Staff briefs Commissioners on regulations, hazards and mitigation strategies as necessary. Approves conditions on development and land use changes based on staff's recommendations.

City Council	Y	Staff briefs the Council Members on regulations, hazards and mitigation strategies as necessary. Approves General Plan Amendments, Municipal Code Updates, Land Use Changes and other recommendations approved by the Planning Commission.
Other		
Technical	Y/N	Has capability been used to assess/mitigate risk in the past?
Grant writing	Y	Have prepared and submitted FEMA HMGP grants, none have been awarded to date. HUD and CDBG Grant funds are obtained annually and are utilized for severe weather (cold and heat) shelters.
Hazard data and information	Y	Data from FEMA, Cal Fire, Sacramento County, Sacramento Metro Fire District, and Countywide LHMP have been utilized to identify mitigation strategies and projects in the past.
GIS analysis	Y	Data from various State and Federal databases have been utilized, such as: FEMA FIRMs, wildfire hazard maps, dam inundation mapping, etc.
Mutual aid agreements	Y	Citrus Heights Police Department and General Services Department have mutual aid agreements in place with adjacent agencies.
Other		
How can these capabilities be expanded and improved to reduce risk?		
Improved staffing levels and funding for consultant lead hazard mitigation planning documents (such as Climate Adaptation Plan). The City has successfully implemented flood control management through projects and more specifically routine maintenance. The City will continue to build on this success and expand projects and routing maintenance in the future. Completion of additional drainage master plan documents will inform staff of other (potentially unknown) locations of deficient flood control infrastructures. The City's mutual aid agreements could be improved with refinements based on after action reporting occurs.		

Source: City of Citrus Heights

A.5.3. Fiscal Mitigation Capabilities

Table A-46 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table A-41 City of Citrus Heights's Fiscal Mitigation Capabilities

Funding Resource	In Place Y/N	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	Drainage projects, erosion projects, street projects with upgrades to Storm drain system, master planning grants. More grant funding needed.

Funding Resource	In Place Y/N	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Community Development Block Grant	Y	CDBG funds have been utilized for Respite Cetner funding during severe weather events.
Federal funding programs (non-FEMA)	Y	Drainage projects, erosion projects, street projects with upgrades to Storm drain system, master planning grants. More grant funding needed.
Fees for water, sewer, gas, or electric services	N	City does not provide these services. Services provided by outside agencies.
Impact fees for new development	Y	Sac County drainage fee program for drainage improvements to reduce flooding. Multi-Modal impact fee and STA Fees are obtained to improve/upgrade the transportation network which improves evacuation routes.
State funding programs	Y	City has received State funding for various drainage upgrades and flood relief projects in addition to funds used to improve the transportation network.
Stormwater utility fee	Y	Monthly fee assessment to fund the drainage program. Additional funds/fee increases would improve the City's ability to complete Storm Drain Master Plan Projects.
Other		
How can these capabilities be expanded and improved to reduce risk?		
City is exploring fee increase options under SB 218 provisions, which is a major hurdle to fee increases. Additional State/Federal funding grants for hazard mitigation projects are requested.		

Source: City of Citrus Heights

A.5.4. Mitigation Education, Outreach, and Partnerships

Table A-47 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information.

Table A-42 City of Citrus Heights's Mitigation Education, Outreach, and Partnerships

Program/Organization	In Place Y/N	How widespread are each of these in your community?
Community newsletters	Y	City hosts multiple social media sites for information campaigns in addition to the City's website, e-notify (mobile and email) service. City also publishes a virtual monthly newsletter via email.

Program/Organization	In Place Y/N	How widespread are each of these in your community?
Hazard awareness campaigns (such as Firewise, Storm Ready, Severe Weather Awareness Week, school programs, public events)	Y	City Franchisee for Solid Waste provides education in its billing, public relations work, and other collection efforts. City's website is kept up to date for storm ready information, emergency operations plan/evacuation routes/creek flow elevation data/links to regional emergency information websites.
Local news	Y	Occasional newspaper articles in Citrus Heights Messenger, Citrus Heights Sentinel and Sacramento Bee. Staff have been interviewed for local newscasts upon requests from the news agency.
Organizations that interact with underserved and vulnerable communities	Y	Community Emergency Response Team Sacramento Stormwater Quality Partnership Homeless Assistance Resource Team Habitat for Humanity
Social media	Y	Facebook, Instagram, X / Twitter
How can these capabilities be expanded and improved to reduce risk?		
The City will continue to look for ways to expand mitigation outreach and partnerships and public information. Support outreach and partnerships can help achieve greater compliance and awareness of hazards and their potential mitigation throughout the community. This is included in the mitigation strategy below in Action #2.		

Source: City of Citrus Heights

A.5.5. Other Mitigation Efforts

The City of Citrus Heights also has many additional mitigation efforts not captured in the table above. These are listed below by hazard.

Multi-Hazard

The City has started pilot projects for solar powered street lights that are not dependent on the power grid. Multiple attempts have been made to fund generators at City facilities to ensure continuity of operations.

The City of Citrus Heights General Plan and the Greenhouse Gas Reduction Plan inform the City's vulnerability and policies/goals to protect citizens and infrastructure from natural hazards. The City is working to complete a Climate Adaptation Plan and Mitigation framework, hazard mitigation funding could be used to complete this effort.

Review, approve, and *occasionally* escort hazardous material transport through City limits.

Dam Failure

The City has an Emergency Action Plan for protecting residents, staff and visitors during emergencies such as wildfires, floods, or other disasters. It includes a downloadable guide encouraging all households to prepare for an emergency. It includes official information sites and where to get help and or resources.

Evacuation routes can be accessed at [City of Citrus Heights City Evacuation Routes and Neighborhood Zones](#).

Drought and Water Shortage

The General Plan addresses water supply and quality primarily under **Goal 50** and its associated policies:

- **Goal 50:** Ensure a safe and manageable supply of water for all users.
- **Policy 50.1:** Coordinate with water purveyors to ensure that the city's water supply is adequate to meet current and future needs.
- **Policy 50.2:** Support water conservation efforts by water purveyors and other agencies.
- **Policy 51.1:** Protect the quality of groundwater and surface water resources in accordance with state and federal standards.

Flood

Arcade Creek Watershed Master Plan: The plan focuses on restoring the 16.2-mile creek, enhancing water quality, managing flood protection, and creating recreational spaces like the Arcade Creek Park Preserve and the Arcade-Cripple Creek Trail. Key efforts include bank stabilization, habitat restoration, and connecting communities with pedestrian/bike trails.

Dry Creek Watershed Master Plan: The Plan focuses on improving water quality, mitigating flood risks across various neighborhood phases, and preserving riparian corridors. Key initiatives include the Creek Corridor Trail Project to enhance public access, restoring habitats in collaboration with the Dry Creek Conservancy, and implementing low-impact development strategies for sustainable water management.

Drainage Master Plans for NH 6&7 / 8,9,10: The Plan outlines capital improvements to the City's stormwater drainage system through engineering, regulatory compliance, operations and maintenance, and restoration of the City's storm drain system and natural creeks/channels and detention/water quality basins which convey and store stormwater within the designated problem locations to reduce or eliminate flooding and drainage problems within the City of Citrus Heights Neighborhoods 6, 7, 8, 9 and 10. Drainage Master Plan Studies for Neighborhoods 1-5 are planned, but are pending funding.

Localized Flood (and Heavy Rains and Storms)

Localized flooding relief projects include: Olivine Ave, bridge maintenance projects (bi-annual) and debris removal, and others identified in the Drainage Master Plans.

Additionally, there are planning mechanisms related to localized flood:

- Municipal Code Chapter 42: Floods
- Municipal Code Chapter 98: Utilities (drainage design and hydromodification requirements)
- Zoning Code: (Creskide set-back requirements)
- City Drainage & Development Policy: Provides guidance for reviewing requests for improvements affecting the existing land and drainage.
- Elevation Certificate Policy (all development near a floodplain)
- Substantial Improvement/Substantial Development Thresholds

Severe Weather: Extreme Cold and Freeze/Extreme Heat

The City has been working to implement public infrastructure resiliency by installing solar powered street lighting, battery backup units for traffic signals and providing on-site generator power to City Hall and the Police Department to allow for continuation of public services during prolonged power outages.

If extreme cold and freeze weather events occur, the City of Citrus Heights supports the Citrus Heights Homeless Assistance Resource Team (HART). The support is through a grant from the Community assistance fund and averages \$30,000 to \$40,000 annually. HART connects the homeless population with shelters and resources. A list of shelter nights, guests, and resources provided for 2025 can be found at <https://www.211sacramento.org/211/online-database/categories/housing/cold-weather-shelters/>.

Citrus Heights operates a cooling Center at the Police Department any day with forecasted temperatures of 100 degrees and higher. It is open from 12 p.m. until temperatures drop below 100 degrees but no earlier than 8 p.m. The City also provides a website showing overnight warming centers and daytime warming spaces in the area at <https://www.211sacramento.org/211/severe-weather-spaces/>.

Wildfire

Vegetation management (mechanical and goats).

The City has an Emergency Action Plan for protecting residents, staff and visitors during emergencies such as wildfires, floods, or other disasters. It includes a downloadable guide encouraging all households to prepare for an emergency. It includes official information sites and where to get help and or resources. Evacuation routes can be accessed at [City of Citrus Heights City Evacuation Routes and Neighborhood Zones](#).

A.6 Mitigation Strategy

A.6.1. Mitigation Goals and Objectives

The City of Citrus Heights adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

A.6.2. NFIP Mitigation Strategy

The City of Citrus Heights joined the National Flood Insurance Program (NFIP) on October 15, 1997. As a participant of the NFIP, the City of Citrus Heights has administered floodplain management regulations that meet the minimum requirements of the NFIP. The management program objective is to protect people and property within the City. The City of Citrus Heights will continue to comply with the requirements of the NFIP in the future.

In addition, the City of Citrus Heights actively participates with Sacramento County to address local NFIP issues through a regional approach. Many of the program activities are the same for the City of Citrus Heights as for Sacramento County since participation at the County level includes all local jurisdictions.

The City of Citrus Heights General Services Department provides public outreach activities which include map information services, public awareness, public hazard disclosure, and flood protection information. This information is readily available to the public and consists of current and accurate flood mapping. In addition, the General Services Department provides information about their stormwater management program and up-to-date information related to the maintenance of our drainage system.

The NFIP's Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS which are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. The City of Citrus Heights recently joined the CRS program and is a Class 7, providing a 15% reduction on flood insurance premiums in the City.

CRS credits for the City fall in the following categories:

- **Activity 310 Elevation Certificates** – a. Construction certificate management procedures (CCMP) - having written procedures that document how a community collects, reviews, corrects, maintains and makes CCs available to inquirers. (38 points)
- **Activity 320 Map Information** – a. Basic FIRM information (MI 1) - basic information found on a FIRM that is needed to accurately rate a flood insurance policy. b. Additional FIRM information (MI 2) - providing information that is shown on most FIRMs, such as protected coastal barriers, floodways, or lines demarcating wave action (50 points).
- **Activity 330 Outreach Programs** – a. Outreach projects (OP) - designing and carrying out public outreach projects; credit may be increased if there is a PPI. (12 points)
- **Activity 340 Hazard Disclosure** – b. Other disclosure requirements (ODR) - each method of flood hazard disclosure required by law. (15 points)
- **Activity 350 Flood Protection Information** – a. Flood protection library (LIB) - having FEMA publications on flood protection topics housed in the public library. b. Locally pertinent documents (LPD) - having additional references on the community's flood problem or local/state floodplain management programs in the public library. c. Flood protection website (WEB1) - providing flood protection information via the community's website. (44 points)
- **Activity 420 Open Space Preservation** – a. Open space preservation (OSP) - keeping land vacant through ownership or regulations (a signed statement that land will be free from buildings, fill, or other encroachment to flood flows). (595 points)
- **Activity 430 Higher Regulatory Standards** – b. Freeboard (FRB) - elevation of the lowest floor of the building or to the elevation to which a non-residential building is dry-floodproofed including all utilities, ductwork, and attached garages. c. Foundation protection (FDN) - engineered foundations. d. Cumulative substantial improvements (CSI) – counting improvements cumulatively. h. Building Code (BC1 and BC2) - adopting and enforcing the International Code Series & BCEGS Rating i. Local drainage protection (LDP) - ensuring new buildings are protected from shallow flooding. q. Regulations administration (RA) - having trained staff and administrative procedures that meet specified standards. (278 points)
- **Activity 440 Flood Data Maintenance** – a. Additional map data (AMD) - implementing digital or paper systems that improve access, quality, and/or ease of updating flood data within the community. b. FIRM maintenance (FM) - maintaining copies of all FIRMs that have been issued for the community.

- c. Benchmark maintenance (BMM) - a program that maintains benchmarks so surveyors can find them and can depend on them to be accurate. (153 points)
- **Activity 450 Stormwater Management** – c. Erosion and sedimentation control regulations (ESC) - regulations to minimize erosion from land disturbed due to construction. d. Water quality regulations (WQ) - regulations that improve the quality of stormwater runoff. (30 points).
- **Activity 510 Floodplain Management** – a. Floodplain management planning (FMP) - a community-wide floodplain management plan that follows a 10-step planning process. (375 points)
- **Activity 540 Drainage System Maintenance** – a. Channel debris removal (CDR) - inspecting public and private drainage systems and removing debris as appropriate. b. Problem site maintenance (PSM) - paying special attention to known problem sites, such as those needing more frequent inspections. c. Capital improvement program (CIP) - having a capital improvement program that corrects drainage problems. d. Stream dumping regulations (SDR) - if the community has and publicizes regulations prohibiting dumping in streams and ditches. (295 points)
- **Activity 630 Dams** – a. State dam safety program (SDS) - credit for the state's program. (37 points)

More information about the floodplain administration in the City of Citrus Heights can be found in Table A-48.

Table A-43 City of Citrus Heights Compliance with NFIP

NFIP Topic	Comments
Staff Resources	
Who is responsible for floodplain management in your community? Provide Department/Title. Do they serve any roles other than Community Floodplain Administrator (FPA)?	Leslie Blomquist, is the City Floodplain Administrator and is the City Engineer in the General Services Department.
Is the Community FPA or NFIP Coordinator a Certified Floodplain Manager?	The Community Floodplain Administrator is not certified, but the Principal Engineer/Drainage Engineer in General Services is a Certified Floodplain Manager.
Is floodplain management an auxiliary function?	Yes. Floodplain management functions as an auxiliary, supportive measure to primary structural flood control by preserving natural, self-sustaining processes that mitigate flood risks. Acting as natural sponges, floodplains absorb, store, and gradually release floodwater, reducing downstream velocity and intensity. These areas improve water quality, provide wildlife habitat, and offer recreation, while protecting infrastructure and reducing damage.
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	NFIP services include permit review, GIS, education and outreach, LOMA/LOMR support, inspections, engineering capability, preparation of the LHMP, and Elevation Certificate Review and certification
What are the barriers to running an effective NFIP program in the community, if any?	Barriers include limited funding and developable area. Many structures were constructed prior to NFIP existence and are in need of rehabilitation/replacement.

NFIP Topic	Comments
Insurance Summary	
How many NFIP policies are in the community? What is the total premium and coverage?	170 policies \$119,040 in premiums \$50,779,000 in coverage
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	20 paid claims \$372,881 in paid claim 2 substantial damage claims
How many structures (residential and non-residential) are exposed to flood risk within the community?	1,456 in 1% annual chance 390 in 0.2% annual chance
Are there Repetitive Loss (RL) and Severe Repetitive Loss Properties (SRL) structures in the community?	14 RL properties: 12 RL properties are single family and 2 RL properties are 2-4 family property use type 0 SRL properties
Describe any areas of flood risk with limited NFIP policy coverage	Based on FEMA's CIS data, there are 1,456 improved parcels located in the SFHA. Only 65 of these or 4.5% carry flood insurance which leaves those without flood insurance extremely vulnerable in this high risk flood zone.
How does the community teach property owners or other stakeholders about the importance of flood insurance?	Outreach letters. Coordination and County DWR public outreach.
What digital sources (like the FEMA Map Service Center, National Flood Hazard Layer) or non-regulatory tools does the community use?	City Website, FEMA Map Service, FEMA FIS, City Hall (front counter support), internal GIS mapping, and Sacramento County GIS Mapping,.
Compliance History	
Is the community in good standing with the NFIP?	Y
Are there any outstanding compliance issues (i.e., current violations)?	No.
Who is responsible (Department, Title) for making substantial damage/improvement determinations? How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance?	General Services Building and Development Permit reviewer. Substantial Damage/ Substantial Improvement (SD/SI) tracking for 5-years up to 50% of current building value. Refer to FEMA mapping tool and FIS to determine SFHA and elevations. Requires EC for any structure that has SHFA within 50 feet of property. Follow FEMA SD/SI guidance for determinations.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	December 8, 2022
Is a CAV or CAC scheduled or needed?	Scheduled.
Regulation	
When did the community enter the NFIP?	10/15/1997
Are the FIRMs digital or paper?	Digital
Has the community adopted the NFIP minimum floodplain management criteria via local regulation? Date of current local regulation?	Yes, matches CA model floodplain ordinance. 2/8/2025
Has the community adopted the latest effective FIRM? Date adopted?	Yes, matches CA model floodplain ordinance. 2/8/2025

NFIP Topic	Comments
How does the community enforce local floodplain regulations and monitor compliance?	Permit reviews, inspections, community complaints/notifications/service request. Progressive enforcement in compliance with our Floodplain Ordinance. General Services and PD Code enforcement coordinate violation notices, fines and inspections for corrective actions.
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	City development regulations exceed the CA regulations, requiring 2 feet of freeboard instead of the State 1 foot. The City also has greater restrictions regarding what can be built in the floodplain.
How are Letters of Map Change (LOMCs) tracked and compiled?	Digital copies with General Services Stormwater repository.
Provide an explanation of the permitting process.	Permits are routed to the development review program and reviewed by engineer, who is a CFM.
Community Rating System	
Does the community participate in CRS? If so, what is the community's CRS Class Ranking?	Yes – Class 7
What categories and activities provide CRS points and how can the class be improved?	Citrus Heights has received points in Activities: 310, 320, 330, 340, 350, 420, 430, 440, 450, 510, 540, and 630. There are improvements that can be made within existing Activities receiving points the City intends to improve mapping, outreach and other study related Activities. The Largest potential improvements would be to complete a FEMA approved citywide flood response drill and after action report to allow for points within Activities 360 and 610 which are currently available but are dependent on the documentation of this drill.
Does the plan include CRS planning requirements?	Y

Source: City of Citrus Heights, FEMA CIS, FEMA PIVOT

A.6.3. Mitigation Actions

The Planning Team for the City of Citrus Heights identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, and timeline are also included. The following hazards were considered a priority for purposes of mitigation action planning:

- Climate Change
- Dam Failure
- Drought & Water Shortage (w/tree mortality)
- Flood: 1%/0.5%/0.2% annual chance
- Flood: Localized Stormwater
- Severe Weather: Extreme Cold and Freeze
- Severe Weather: Extreme Heat
- Severe Weather: Heavy Rains and Storms (Hail, Lightning, Wind)

- Severe Weather: High Winds and Tornadoes
- Wildfire (with smoke and air quality)

Low priority hazards for mitigation planning include:

- Aquatic Nuisance Species (plant/animal)
- Earthquake (w/subhazards)
- Landslide, Mudslide, Debris Flow
- Levee Failure
- Sea Level Rise
- Subsidence

It should be noted that many of the projects submitted by each jurisdiction in Table 5-4 in the Base Plan benefit all jurisdictions whether or not they are the lead agency. Further, many of these mitigation efforts are collaborative efforts among multiple local, state, and federal agencies. In addition, the countywide and City public outreach actions, as well as many of the emergency services actions, apply to all hazards and jurisdictions regardless of hazard priority. Collectively, this LHMP's multi-jurisdictional mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of each jurisdiction to implement over the next 5 years covered by this Plan. It should further be noted, that each jurisdiction has focused on identifying those mitigation actions and projects to address their priority hazards, which are both realistic and reasonable for them to implement for this 5-year planning process, and would like to preserve their right to modify hazard priorities should future projects be identified where the implementing jurisdiction has the future capacity to implement. The participating jurisdictions are not obligated by this document to implement any or all of these projects. Rather this mitigation strategy represents the desires of the jurisdictions to mitigate the risks and vulnerabilities from identified hazards. The actual selection, prioritization, and implementation of these actions will also be further evaluated in accordance with the mitigation categories and criteria contained in Appendix C.

Mitigation Actions

The City has put forward the actions as shown in Table A-49. Details of the actions can be found below the table.

Table A-44 City of Citrus Heights Mitigation Actions

Action Title	New Action/ Previous Action	Address Current Development	Address Future Development	Continued NFIP Compliance	Mitigation Type
Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan	Previous Action	X	X		Prevention
Action 2. Comprehensive Public Education, Outreach, and Awareness Program Enhancements for Natural Hazards and Public Understanding of Disaster Preparedness	Previous Action	X	X	X	Prevention Public Information
Action 3. Critical Facility (City Hall) Generator Project	Previous Action	X	X		Property Protection Emergency Services

Action Title	New Action/ Previous Action	Address Current Development	Address Future Development	Continued NFIP Compliance	Mitigation Type
Action 4. Neighborhood Storm Drain Master Plans – Phase IV: Neighborhood Areas 1, 2, and 3 (planned for a future year); Phase III: Neighborhood Areas 5, 6, and 11 (planned for a future year)	Previous Action	X	X	X	Prevention Property Protection Structural Projects Natural Resource Protection
Action 5. Implement Storm Drain Master Plan Projects	Previous Action	X	X	X	Prevention Property Protection Structural Projects Natural Resource Protection
Action 6. Develop Climate Adaptation Plan (CAP)	New Action	X	X	X	Prevention Property Protection Natural Resource Protection
Action 7. Corrugated Metal Pipes (CMP) Storm Drain Replacement Project	Previous Action	X	X	X	Property Protection Structural Projects Natural Resource Protection
Action 8. Creek Maintenance and Restoration Project	Previous Action	X	X	X	Property Protection Natural Resource Protection
Action 9. Off System Evacuation Routes. Increase pedestrian and bicycle evacuation routes by constructing regional bike/pedestrian trail infrastructure and expanding connection to neighborhoods (particularly in vulnerable areas).	Previous Action	X	X	X	Emergency Services
Action 10. Tree Planting/Canopy Preservation and Enhancement Project	Previous Action	X	X		Property Protection Natural Resource Protection
Action 11. Interconnected Transportation System Project	Previous Action	X	X		Emergency Services
Action 12. Green Streets and Low Impact Development (LID) Project	New Action	X	X		Prevention Property Protection
Action 13. Trash Racks and Debris Cages Project	Previous Action	X	X	X	Prevention Property Protection
Action 14. Reduce the Urban Heat Island Effect (UHIE)	New Action	X	X		Prevention Property Protection Natural Resource Protection
Action 15. Purchase Personal Protection Equipment for Field Staff	New Action	X	X		Prevention Emergency Services
Action 16. Wildfire Fuel Reduction Project	New Action	X	X		Property Protection Natural Resource Protection

Action Title	New Action/ Previous Action	Address Current Development	Address Future Development	Continued NFIP Compliance	Mitigation Type
Action 17. Disaster Preparedness Exercise to Test Operational & Emergency Plans	New Action	X	X		Emergency Services
Action 18. Develop Plan for Folsom Dam Failure Specific to Citrus Heights	New Action	X	X	X	Prevention Property Protection Emergency Services
Action 19. Bridge and Roadway Retrofit Projects	Previous Action	X	X	X	Structural Projects Emergency Services
Action 20. Landscape and Irrigation Modifications	New Action	X	X		Prevention Property Protection Natural Resource Protection
Action 21. Develop a Firewise USA Community Plan	New Action	X	X		Prevention Property Protection Natural Resource Protection
Action 22. Acquire Floodplain and Floodprone Parcels and Designate as Open Space	New Action	X	X	X	Prevention Property Protection Natural Resource Protection
Action 23. Cable Trellis w/ Vines Shading Project	Previous Action	X	X		Prevention Property Protection

Action 1. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

Hazards Addressed: Multi-hazard (Climate Change, Dam Failure, Drought & Water shortage, Earthquake (w/subhazards), Floods: 1%/0.2% annual chance (w/levee failure), Floods: Localized Stormwater, Landslide and Debris Flow, Sea Level Rise, Severe Weather: Extreme Cold and Freeze, Severe Weather: Extreme Heat, Severe Weather: Heavy Rains and Storms (Hail, Lightning, Wind), Severe Weather: High Winds and Tornadoes, Subsidence, Wildfire (w/smoke and air quality))

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Local jurisdictional reimbursement for mitigation projects and cost recovery after a disaster is guided by Government Code Section 8685.9 (Assembly Bill (AB) 2140). For eligible Public Assistance projects, the typical local (non-federal) cost share is 25% of the total project cost. The California Disaster Assistance Act (CDAA) can allow the state to pay up to 18.75% of the non-federal share that would otherwise fall to the county or city. Upon approval of the legislature, counties and cities that are AB 2140 compliant are also eligible to be considered for the remaining 6.25% local share to be funded by the state, essentially covering the entire local-share cost for eligible Public Assistance projects.

Project Description: AB 2140 compliance requires that each applicable jurisdiction (counties and cities) adopt the 2026 Sacramento County Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) as part of the Safety Element of its General Plan in accordance with the CDAA and Cal OES AB 2140 guidance.

Adoption of the LHMP into the Safety Element of the General Plan may be by reference or incorporation. The current approved LHMP must be easily accessible and available to the public viewing the Safety Element.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Safety Element of General Plan

Responsible Office/Partners: City General Services Department and Planning Department

Benefits (Losses Avoided): Incorporation of an adopted LHMP into the Safety Element of the General Plan will help counties and cities maximize the cost recovery potential following a disaster.

Potential Funding (Local Budgets, Grant Funds, etc. by specific Type): Local budgets (staff time, General Fund)

Timeline: In conjunction with and/or within 1 year of adoption of the 2026 Sacramento County Multi-Jurisdictional LHMP Update

Project Priority: High

Action 2. Comprehensive Public Education, Outreach, and Awareness Program Enhancements for Natural Hazards and Public Understanding of Disaster Preparedness

Hazards Addressed: Multi-hazard (Climate Change, Dam Failure, Drought & Water shortage, Earthquake (w/subhazards), Floods: 1%/0.2% annual chance (w/levee failure), Floods: Localized Stormwater, Landslide and Debris Flow, Sea Level Rise, Severe Weather: Extreme Cold and Freeze, Severe Weather: Extreme Heat, Severe Weather: Heavy Rains and Storms (Hail, Lightning, Wind), Severe Weather: High Winds and Tornadoes, Subsidence, Wildfire (w/smoke and air quality))

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Sacramento County, incorporated communities, and other local jurisdictions play a key role in public outreach and education efforts to communicate the potential risk and vulnerability of their community to the effects of natural hazards. A comprehensive, coordinated multi-hazard public education program will better inform the community of natural hazards of concern and actions the public can take to be better prepared for the next natural hazard event or disaster. Effective public education can reduce hazard related losses and promote self reliance.

Project Description: A comprehensive multi-hazard education and outreach program will ascertain both broad and targeted educational needs throughout the community. The City will work with the County and other agencies as appropriate to develop timely and consistent annual outreach messages in order to communicate the risk and vulnerability of natural hazards of concern to Sacramento County communities. This includes measures the public can take to be better prepared and to reduce loss of life, damages, and other impacts from a hazard event. The public education effort will utilize effective outreach

and communication strategies to reach all populations, will leverage and build upon existing mechanisms, and will consider:

- Using a variety of information outlets, including websites, local radio stations, news media, schools, and other local public events;
- Creating and distributing (where applicable) brochures, leaflets, water bill inserts, websites, and public service announcements;
- Displaying public outreach information in County, City, and other local agency office buildings, libraries, and other public places and events;
- Developing public-private partnerships and incentives to support public education activities; and
- Implementing other program components and enhancements identified over the next 5 years.

Other Alternatives: Continue public information activities currently in place.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Existing City and County outreach programs will be reviewed for effectiveness and leveraged and expanded upon to reach the broader region.

Responsible Office/Partners: City of Citrus Heights General Services Department and other City Departments depending on the specific outreach, and conducted in partnership with County OES

Benefits (Losses Avoided): Increased public knowledge of potential hazards of concern; the risk and vulnerability of Sacramento communities to natural hazards; and possible activities that can be undertaken to mitigate hazards and to be better prepared, before, during and after a hazard event. Protect lives and reduce damages. Relatively low cost to implement. Improve public response in an emergency or disaster.

Potential Funding (Local Budgets, Grant Funds, etc.): Local budgets (City General Fund, special revenue funds, CIP funding, staff time) CA DWR grants, Cal OES/FEMA grants (PDM, HMGP, FMA), or other funding sources.

Timeline: To be initiated within 1-2 years; Ongoing/Annual public education and awareness campaign

Project Priority (High, Medium, Low): High

Action 3. *Critical Facility (City Hall) Generator Project*

Hazards Addressed: Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater Severe Weather: High Winds, Wildfire, Severe Weather: Extreme Heat, Freeze, Heavy Rains

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): A wide variety of hazards can lead to power outages during emergencies. The lack of power would affect the city's ability to respond to the community needs, to provide critical infrastructure needs and to provide mutual aid to other agencies. The installation of emergency back-up generators would allow the city to provide ongoing services during times of crisis.

Project Description: Design, procure and install generator capacity for City Hall to increase resiliency and operations during natural hazard events including additional shelter space and heating/cooling centers especially for vulnerable populations.

Other Alternatives: No Action, Solar back-up with batteries

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, General Plan

Responsible Office/Partners: City General Services Department staff in coordination with SMUD, consultants, and contractors

Project Benefits (Losses Avoided): Reduced risk to critical facilities, improved emergency response and public communications, Reduced risk to citizens and improved recovery response

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund. Potential Grant Funding: CalOES, FEMA (HMGP, PDM) and other possible grant sources

Timeline: Within 1-5 years

Project Priority (High, Medium, Low): High

Action 4. *Neighborhood Storm Drain Master Plans - Phase IV: Neighborhood Areas 1, 2, and 3 (planned for a future year); Phase III: Neighborhood Areas 5, 6, and 11 (planned for a future year)*

Hazards Addressed: Climate Change, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather; Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Most of the City of Citrus Heights' storm drain system was constructed prior to incorporation and was designed to standards that have since been superseded. Additionally, portions of the storm drain system have passed their useful life or are undersized and need to be replaced.

Project Description: Since the City of Citrus Heights assumed responsibility for storm drain maintenance following incorporation, a systematic evaluation of the storm drain system has been conducted to address areas of drainage concern. The city is divided into 11 neighborhoods with a group of neighborhoods being included in each master plan. Master Plans have been completed for Neighborhoods 6, 7, 8, 9 and 10. Storm Drain Master Plans for the remaining neighborhoods are planned for the future.

Other Alternatives: No Action

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan

Responsible Office/Partners: City General Services Department in coordination with consultants

Project Benefits (Losses Avoided): Reduced risk to critical facilities. Reduced risk to public property. Reduced risk to citizens

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Stormwater Fund, CIP. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, PDM), CDFW, DWR and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): High

Action 5. Implement Storm Drain Master Plan Projects

Hazards Addressed: Climate Change, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather: Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): The City Storm Drain System is old and in need of retrofit/upsizing or replacement. The City has prepared Storm Drain Master Planning for neighborhoods 6-10 to identify and prioritize the repairs needed.

Project Description: The following projects have been identified and prioritized:

- Blayden Court: Construct redundant SD system on Oak Ave and potential basin in park
- Amsell Court: Construct redundant SD system on Oak Ave and potential basin in park
- Creekbed Lane Slippery Creek Lane: Repair outfall and creek embankment down stream
- Shadow Creek Culverts: Construct low water crossings or replace with pedestrian bridge
- Stanford Avenue: Increase capacity of drainage system to alleviate persistent flooding.
- 7759 Poplar Avenue: upgrade drainage system to current standards and alleviate flooding.

Other Alternatives: No action, continued localized flooding (with claims to the City)

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operation Plan, Storm Drain Master Plans

Responsible Office/Partners: City General Services Department staff, consultants and contractors

Project Benefits (Losses Avoided): Minimize loss of human life and property and protect public infrastructure and evacuation routes.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program, Storm Water Fund. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, PDM), CDFW, DWR and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): High

Action 6. *Develop Climate Adaptation Plan (CAP)*

Hazards Addressed: Climate Change, Drought & Water Shortage, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather: Extreme Heat, Severe Weather: Extreme Cold and Freeze, Wildfire (w/ smoke and air quality).

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Long term secondary consequences related to Climate Change include human health and safety risks, economic disruptions, diminished water supply, shifts in ecosystem function and habitat qualities, damaged infrastructure, and difficulties with provision of basic services. Vulnerable populations make up almost half of the City population and are particularly susceptible to the risks of Climate Change. The City of Citrus Heights needs to address the anticipated impacts of Climate Change specific to their community.

Project Description: The CAP will build on the Sacramento County CAP and:

- Conduct a vulnerability assessment to identify Climate Change impacts to Citrus Heights
- Develop an adaptation framework and strategies based on need and available financing
- Identify integrated finance and grant funding to support adaptation strategies

Other Alternatives: Address each hazard alone rather than an integrated approach

Existing Planning Mechanism(s) through which Action Will Be Implemented: Sacramento County CAP, Greenhouse Gas Reduction Plan, General Plan, Design Standards, Development Approval Process

Responsible Office/Partners: City Planning Department in coordination with consultants

Project Benefits (Losses Avoided): The result will minimize impacts related to the hazards addressed and will prioritize the multiple vulnerable and disadvantaged communities in Citrus Heights.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund and Development Fees. Potential Grant Funding: FEMA HMGP, State Adaptation Planning Grant, and other grant sources

Timeline: Within 1-5 years

Project Priority (High, Medium, Low): High

Action 7. *Corrugated Metal Pipes (CMP) Storm Drain Replacement Project*

Hazards Addressed: Climate Change, Flood (1%/0.5%/0.2%) Flood Localized Stormwater, Severe Weather; Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): The City of Citrus Heights inherited a storm drain system that was designed and constructed to standards that have since been superseded. The storm drain system at that time was commonly constructed using corrugated metal pipes (CMP), which has passed its useful life. This often results in the invert of the pipe rusting, leading to trench failure, potholes, and erosion. The CMPs need to be upgraded to concrete or PVC.

Project Description: The project would inventory the material used in all Storm Drains (some pipe material is listed as unknown), and the pipes constructed with CMP's would be cleaned, inspected, and replaced if they have rusted inverts, or placed on an accelerated review program to monitor their condition.

Other Alternatives: Allow ongoing deterioration until roadway failure or pipe failure causing localized flooding

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operation Plan, Capital Improvement Program, Storm Drain Master Plan

Responsible Office/Partners: City GSD Staff in coordination with consultants and contractors

Project Benefits (Losses Avoided): Reduced risk to critical facilities, private property, evacuation routes and proper stormwater flow management

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: CIP, Stormwater Fund. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, PDM), CDFW, DWR and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): High

Action 8. Creek Maintenance and Restoration Project

Hazards Addressed: Climate Change, Flood: (1%/0.5%/0.2%), Flood: Localized Stormwater, Severe Weather: High Winds, Wildfire

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): There are 30+ miles of creeks in the City of Citrus Heights with portions of overgrown vegetation and erosion from increased flows, higher velocity, runoff from adjacent properties and burrowing animals. Erosion subjects the natural channel and bridge abutments to damage. The City has a Streambed Alteration Agreement with the California Department Fish and Wildlife (CDFW) for routine maintenance of vegetation in and near waterways, including creeks, channels, and basins. Various locations have been identified for erosion control improvements and excavation work to improve flow capacity and minimize the potential for blockages and localized flooding. .

Project Description: The project includes:

1. Continued routine creek vegetation maintenance
2. Improving structural integrity of channel slopes in various locations to reduce erosion
3. Excavations to remove vegetation that impede water flow and reduce flood capacity
4. Renew Routine Maintenance Agreement with CDFW

Other Alternatives: Ongoing channel erosion and water quantity degradation

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, Storm Drain Master Plan, Drainage and Development Policy

Responsible Office/Partners: City General Services Department in coordination with Sunrise Recreation and Park District (SRPD), consultants, and contractors.

Project Benefits (Losses Avoided): Reduced risk to critical infrastructure and facilities, private property, and risk to citizens

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Stormwater Fund, SRPD. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, PDM), CDFW, DWR, and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 9. *Off System Evacuation Routes. Increase pedestrian and bicycle evacuation routes by constructing regional bike/pedestrian trail infrastructure and expanding connection to neighborhoods (particularly in vulnerable areas).*

Hazards Addressed: Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Wildfire, Severe Weather: Heavy Rain and Storms, High Winds and Tornadoes

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): During extreme weather events and other emergencies, such as dam failure, or wildfire, the public may frequently have to walk or bicycle to seek safety. In the event of an evacuation, pedestrian and bicycle trails can and have served as the secondary transportation backbone. Filling gaps in trail segments and connections and maintaining trail infrastructure improves evacuation routes and can provide additional access for emergency vehicles and response teams.

Project Description: The project is to design and construct new trail segments to better connect neighborhoods and communities. Coordinate with Sacramento County, adjacent cities, Sac Metro Fire, Sunrise Park and Recreation District and SMUD in comprehensive planning of a well-designed trail network. Shade canopy and trail maintenance are included in project.

Other Alternatives: No Action. Existing identified evacuation routes will be used

Existing Planning Mechanism(s) through which Action Will Be Implemented: Bicycle, Pedestrian and Trails Master Plans, Design Standards and Protocols; Include trails and construction in Specific Plans, Subdivisions and new projects. Coordination with other partners in trail planning and construction.

Responsible Office/Partners: City General Services Department and Planning Staff in coordination with Regional Parks, consultants and contractors, Sacramento County, area cities, Sac Metro Fire, SMUD and other affected agencies.

Project Benefits (Losses Avoided): Minimize loss of human life and property during emergencies requiring evacuation. Increase evacuation options and provide a secondary transportation network.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Measure A Bond Funding, New Development. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), CDFW, DWR, ATP, CMAQ, and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 10. Tree Planting/Canopy Preservation and Enhancement Project

Hazards Addressed: Climate Change, Drought & Water Storage, Severe Weather: Extreme Heat, High Winds and Tornadoes

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Locations where development dominates the landscape experience higher temperatures due to the Urban Heat Island Effect (UHIE), compared to landscaped and or natural vegetation areas. Planting and maintaining trees in urban areas provide a cool green canopy of shade to reduce the UHIE, reduce energy consumption, enhance livability by softening street noise and increasing pedestrian use, improve air quality, and provide stormwater quality benefits.

Project Description: The project would maintain healthy urban forests; restore trees and tree canopy in public spaces, roadways and commercial parking lots. Promote and increase tree planting citywide to increase shading and reduce urban heat islands and associated hazards.

Other Alternatives: No Action

Existing Planning Mechanism(s) through which Action Will Be Implemented: General Plan Measure 7-1.A, Urban Forest Management Plan, Capital Region Climate Readiness Collaborative

Responsible Office/Partners: City Planning and General Services Department staff in coordination with consultants, contractors, Sacramento Tree Foundation and the Capital Region Climate Readiness Collaborative

Project Benefits (Losses Avoided): Reduce vulnerability to extreme heat events, improve water quality, replace damaged trees from severe weather events and associated hazards

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program, Tree Mitigation Fund. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), State grants, SMUD, PGE Mitigation Funding, Sacramento Tree Foundation, and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 11. Interconnected Transportation System Project

Hazards Addressed: Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather; Heavy Rain and Storms, and High Winds and Tornadoes, Wildfire

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Transportation routes have been a limiting factor in evacuation during recent emergencies. The City has identified major evacuation routes, coordinating the signals on these corridors will improve operations and evacuation times. Traffic studies may include roundabout intersections as a part of the Interconnected Transportation System.

Project Description: The project would provide the interconnection of all traffic signals to allow the traffic engineer to control signals to optimize evacuations.

Other Alternatives: No Action.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, General Plan,

Responsible Office/Partners: City General Services Department in coordination with consultant and contractor

Project Benefits (Losses Avoided): Minimize loss of human lives and property

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program. Potential Grant Funding: CalOES, FEMA (HMGP, PDM) , Caltrans, and other grant sources

Timeline: Within 1 year and on going

Project Priority (High, Medium, Low): Medium

Action 12. *Green Streets and Low Impact Development (LID) Project*

Hazards Addressed: Climate Change, Drought & Water Shortage, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather: Extreme Heat

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Increased stormwater runoff quantity, intensity, and pollutant load from the built environment have led to flooding and Urban Heat Island Effect (UHIE) associated risks. The risks can be mitigated through the inclusion of various Green Streets and LID design and construction techniques. Current LID and Green Street design required in development projects and CIP can be extended to public property design where possible.

Project Description: The project would pursue the inclusion of Green Streets and LID facilities on public property, and continued use in development projects, and capital improvement projects.

Other Alternatives: No Action. No new water quality features, green streets, or groundwater recharge from City projects

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, Be River Friendly

Responsible Office/Partners: City General Services Department and Planning Department in coordination with consultants and contractor

Project Benefits (Losses Avoided): LID reduces flooding and erosion by slowing down stormwater runoff and removes pollutants by natural filtration and recharges groundwater. Adding green spaces beautifies neighborhoods, creates wildlife habitat, increases shade cover and can increase property values.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: CIP. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), CDFW, DWR, other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 13. *Trash Racks and Debris Cages Project*

Hazards Addressed: Climate Change, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather: High Winds and Tornadoes

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Trash and debris can cause clogs in the storm drain system when conveyed by stormwater runoff. Trash racks and debris cages prevent debris from entering storm drain systems while still allowing stormwater to pass through the system into internal creeks and waterways.

Project Description: The project would identify high impact locations in need of trash racks and debris cages, install the devices and develop a maintenance schedule.

Other Alternatives: No Action

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, Storm Drain Master Plan

Responsible Office/Partners: City General Services Department in coordination with consultant and contractor

Project Benefits (Losses Avoided): Minimize loss of human lives and property. Improved storm drain system capacity and system resilience

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program, Stormwater Fund. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, PDM), CDFW, DWR and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 14. Reduce the Urban Heat Island Effect (UHIE)

Hazards Addressed: Climate Change, Drought, & Water Shortage, Severe Weather: Extreme Heat Wildfire (w/ smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Urban areas using man made materials such as concrete and asphalt absorb heat and increase temperature by several degrees. The result is increased emissions of air pollutants and increased production of ozone which in turn results in health impacts, increased energy use and infrastructure damage.

Project Description: Implement “Cool Communities” strategies including increasing tree plantings, increased vegetation uses for shading, using cool/green roofs and cool/pervious pavements

Other Alternatives: Solar canopies over large parking lots and rooftops

Existing Planning Mechanism(s) through which Action Will Be Implemented: General Plan, Zoning Code, Design Guidelines, Improvement Standards, Building Code

Responsible Office/Partners: City General Services Department, Planning Department coordinating with consultants

Project Benefits (Losses Avoided): Lower cooling costs, reducing energy consumption and GHG emissions, improving air quality. Reduced health issues related to air quality.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund Capital Improvement Program. Potential Grant Funding: CALOES, FEMA (HMGP, PDM) and other grant sources

Timeline: Within 1-5 years and ongoing

Project Priority (High, Medium, Low): Medium

Action 15. *Purchase Personal Protection Equipment for Field Staff*

Hazards Addressed: Wildfire (w/ smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Wildfires occur frequently in California impacting air quality. Smoke and poor air quality are a significant threat to staff responding to damage or performing day-to-day field work in poor air quality.

Project Description: The project will identify and purchase the type, quantity, sizes and cost of personal protective equipment necessary to protect health and safety of field during day-to-day field work in poor air quality from the wildfire.

Other Alternatives: No action

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operation Plan, Employee Safety Handbook

Responsible Office/Partners: City General Services Department, Building Department

Project Benefits (Losses Avoided): Protect human lives, safe response to wildfire damage and day-to-day field work

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), EMPG, CAL Fire grants, and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 16. *Wildfire Fuel Reduction Project*

Hazards Addressed: Climate Change, Wildfire (w/ smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Drought conditions have stressed trees and other vegetation, increased flammability and lengthening the fire season, Wildfire suppression is needed to reduce fire loads and reduce response time to minimize wildfire size and intensity.

Project Description: Mitigation includes fire fuel reduction and firebreaks maintenance. Methods vary from hand crews with manual tools, livestock grazing, prescribed burns, mechanical fuels removal, planting of fire resilient vegetation and/or invasive species removal. The method used depends on the terrain and type of fire fuel to remove (dry vegetation, limb ladders, etc).

Other Alternatives: Continued vegetation management with limited local funds.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operation Plan

Responsible Office/Partners: City General Services Department in coordination with Sunrise Recreation and Park District, Sacramento Metropolitan Fire District and contractors

Project Benefits (Losses Avoided): Minimize loss of human lives and property and public infrastructure/services

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund, Potential Grant Funding: Cal Fire wildfire prevention grants, CALOES, FEMA (HMGP, PDM) and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 17. Disaster Preparedness Exercise to Test Operational & Emergency Plans

Hazards Addressed: Multi Hazard, Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%), Flood: Localized Stormwater, Severe Weather: High Winds, Wildfires, Severe Weather Extreme Heat and Cold.

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Citrus Heights relies on the multi-tiered Sacramento County Emergency Operations Plan with localized City resources. Emergency Information Guide is provided to citizens on the City Web Site. Enacting a local emergency scenario drill and a regional emergency scenario drill will test response and identify needed improvements to local and regional disaster response.

Project Description: The project will include

- Design of a local emergency/disaster scenario and coordinate with area agencies to design a regional scenario.
- Identification and recruitment of responders from City and regional agencies
- Public Outreach and advertising of the proposed drills
- Conduct the response to the scenarios

- Prepare a Lessons Learned Report and implement any needed changes to improve response

Other Alternatives: No action. Plan will remain untested.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan

Responsible Office/Partners: City General Services Staff, Police Department Staff, Sac Metro Fire, SMUD, and area Cities

Project Benefits (Losses Avoided): Minimize loss of human life and property. Foster a more coordinated emergency response. After Action Plan may result in updates to the Emergency Operation Plan.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund; Potential Grant Funding: CalOES, FEMA (HMGP, PDM), EMPG, DWR, and other grant sources

Timeline: Within 1 year and ongoing

Project Priority (High, Medium, Low): Medium

Action 18. Develop Plan for Folsom Dam Failure Specific to Citrus Heights

Hazards Addressed: Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Folsom Dam and Reservoir catches runoff from the extensive American River watershed and are the key flood control structures protecting the Sacramento metropolitan area. A breach or failure would lead to rapid devastating flooding. Vital infrastructure, highways, buildings, hospitals and power facilities would be impacted. Evacuation routes would be compromised.

Project Description: Contact and coordinate with Bureau of Reclamation to become familiar with their plan in case of failure. Include Bureau of Reclamation in a Regional Disaster Preparedness Drill. Become more involved with the Placer County Emergency Operations Plan which includes Citrus Heights routes for Evacuation. Evaluate proposed evacuation routes for suitability.

Other Alternatives: No other alternative

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, Placer County Emergency Operations Plan

Responsible Office/Partners: City General Services Department Staff, Bureau of Reclamation, Placer County

Project Benefits (Losses Avoided):

- Minimize loss of human lives and property

- Improve emergency preparedness
- Improve evacuation routes

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: CIP; Potential Grant Funding: CalOES, FEMA (HMGP, PDM), DWR and other grant sources

Timeline: 3 to 5 years

Project Priority (High, Medium, Low): Medium

Action 19. Bridge and Roadway Retrofit Projects

Hazards Addressed: Climate Change, Dam Failure, Flood: (1%/0.5%/0.2%) Flood: Localized Stormwater, Severe Weather: Heavy Winds and Tornadoes, Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): The city's transportation infrastructure is critical for economic growth, effective response during emergency/disaster situations and citizen evacuation during emergencies. Many of the City's existing bridges were constructed pre-NFIP and will be inundated by 100-year storm flows.

Project Description: The project would evaluate and prioritize bridges and roads in the City of Citrus Heights for rehabilitation to meet current seismic standards and to elevate them above base flood elevations to maintain dry access. In some situations, the mitigation could include reconstruction with stabilization or armoring of vulnerable shoulders or embankments.

Other Alternatives: Allow ongoing flooding

Existing Planning Mechanism(s) through which Action Will Be Implemented: Design Standards, Emergency Operations Plan, General Plan

Responsible Office/Partners: City General Services Department in coordination with consultant and contractor

Project Benefits (Losses Avoided): Minimize loss of human lives and property. Enhanced bridge safety, improved evacuation reliability, reduced disaster response and recovery times. Lower flood risk

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program, Stormwater Fund. Potential Grant Funding: CalOES, FEMA (HMGP, FMA, BRIC), CDFW, DWR, Caltrans HBP and other grant sources

Timeline: 3 – 5 and ongoing

Project Priority (High, Medium, Low): Medium

Action 20. Landscape and Irrigation Modifications

Hazards Addressed: Climate Change, Drought & Water Shortage (w/ tree mortality), Severe Weather: Extreme Heat

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Public landscaped areas within lighting districts and City owned facilities do not all meet current water conservation standards for low flow and water usage restrictions.

Project Description: Evaluate current irrigation procedures and equipment, install more efficient irrigation equipment where evaluation demonstrates needs Review City Measure 7-1.A (Green Infrastructure) and update inventory if needed; and add drought-tolerant plants in public areas. Include information on drought tolerant plants ape on the City website for city residents.

Other Alternatives: No action

Existing Planning Mechanism(s) through which Action Will Be Implemented: City Measure 7-1.A (Green Infrastructure). Irrigation Equipment Standards

Responsible Office/Partners: City General Services Department and Planning Department

Project Benefits (Losses Avoided): Reduced drought risk, management of water supply shortage and improved tree canopy

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: Capital Improvement Program, Tree Mitigation Fund, General Fund. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), State grants, collaboration with Sacramento Tree Foundation, and other grant sources

Timeline: 3-5 years

Project Priority (High, Medium, Low): Low

Action 21. Develop a Firewise USA Community Plan

Hazards Addressed: Climate Change, Wildfire (w/smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): Increased wildfires leave homes, business and landscaping vulnerable with potential human life, property and economic loss.

Project Description: Firewise USA recognition includes 5 steps to empower residents and stakeholders to work together to enhance the area's wildfire resilience.

1. Form a core group

2. Develop a wildfire risk assessment plan
3. Create and maintain a wildfire action plan
4. Engage the community
5. Apply for recognition

Other Alternatives: No other

Existing Planning Mechanism(s) through which Action Will Be Implemented: Emergency Operations Plan, Sacramento Metropolitan Fire District Risk Reduction Plan

Responsible Office/Partners: City General Services Department and Planning Department in coordination with consultants

Project Benefits (Losses Avoided): Minimize loss of human lives and property and Potential reduction of fire insurance for residents

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: General Fund. Potential Grant Funding: CAL FIRE and other grant sources

Timeline: 2 to 5 years

Project Priority (High, Medium, Low): Low

Action 22. Acquire Floodplain and Floodprone Parcels and Designate as Open Space

Hazards Addressed: Flood: 1%/0.5%/0.2% Annual Chance; Flood: Localized Stormwater; Severe Weather: Heavy Rains and Storms

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background(Problem Statement): This action is designed to mitigate flood risks and support sustainable public ownership of vulnerable areas. Acquiring properties, as an alternative to elevation or other mitigation strategies, may be a viable solution when a structure is exposed to flood risks and is located in an area that can be effectively managed for long-term public ownership.

Project Description: This project would include working toward agreement with property owners for the acquisition of floodplain / floodprone properties and the implementation of deed restrictions to ensure long-term management and prevent future development on the acquired land. Historically, the City has designated these as set-aside parcels (to be designated as floodplain / flood-storage) as a part of larger developments or have received these lands in donation from the owner (City incurs costs of lot line adjustments and Property Title Modifications). This Action would also allow the City to accept (in donation) or acquire undeveloped parcels that have a history of flooding or are deemed “undevelopable” due to the extent of the mapped floodplain.

Other Alternatives: Flood control, floodproofing, and/or elevating existing structures in floodplain/floodprone areas.

Existing Planning Mechanism(s) through which Action Will Be Implemented:

- Drainage and Development Policy.
- CRS Activities (particularly 420 – Open Space Preservation, 501 Repetitive Loss Parcels, 510 – Floodplain Management Planning, and 520 – Acquisition and Relocation).
- General Plan – Open Space Element

Responsible Office/Partners: Planning, General Services

Project Benefits (Losses Avoided): The project safeguards public safety by minimizing risks to life and decreases the likelihood of property and infrastructure damage. Additionally, it offers supplementary benefits by supporting natural resources.

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): FEMA Grants, HCD Grants

Timeline: 3-5 Years

Project Priority (High, Medium, Low): Low

Action 23. Cable Trellis w/ Vines Shading Project

Hazards Addressed: Climate Change, Drought & Water Shortage, Flood: (1%/0.5%/0.2%), Flood: Localized Stormwater, Severe Weather: Extreme Heat, Wildfire (w/ smoke and air quality)

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background (Problem Statement): There is some evidence that rising temperatures are a result of the increase in manmade surfaces acting as heat sinks, and that increased foliage can provide some relief. Trees provide relief when they are large enough to provide shade in the hard surfaces, but vines could be an alternative if trained to follow a cable lattice network over the hard surfaces. The vegetation can also help to slow and clean storm water run-off that would otherwise fall on the impervious surfaces and quickly run off.

Project Description: Trees in parking lot islands would be replaced with vertical columns filled with soil medium and vine plugs that would be trained to grow up the columns and then across cables suspended between the columns. A test location for a pilot project would be 2 uncovered paved patio areas at municipal buildings.

Other Alternatives: Plant slow growing trees. Allow pavement and impervious surfaces to remain a heat sink

Existing Planning Mechanism(s) through which Action Will Be Implemented: Zoning Code and Design Guidelines

Responsible Office/Partners: City General Services Department and Planning Department in coordination with consultant

Project Benefits (Losses Avoided): Reduced heat sink and reduced storm water run-off

Potential Funding (Local Budgets, Grant Funds, etc. by specific type): Local Funding: CIP. Potential Grant Funding: CalOES, FEMA (HMGP, PDM), CDFW, DWR, Water Board and other grant sources

Timeline: 3-5 years and ongoing

Project Priority (High, Medium, Low): Low